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ALBERTA JUNIOR HIGH SCHOOL ELECTIVE PROGRAMS

DEVELOPED UNDER THE RECOMMENDATIONS

OF THE DEPARTMENT OF EDUCATION

WALDO A. SAWATZKY

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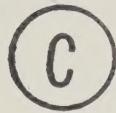
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ALBERTA JUNIOR HIGH SCHOOL ELECTIVE PROGRAMS
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OF THE DEPARTMENT OF EDUCATION

by



WALDO A. SAWATZKY

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES
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ABSTRACT

The purpose of this study was to explore and describe the characteristics of elective programs implemented under the 1969 provincial recommendations for Alberta junior high schools. Five characteristics were delineated: incidence of electives, number of electives offered, elements of choice in elective programs, elective program time allocations, and value-factors underlying the programs of electives.

A questionnaire was developed and sent to 300 principals of junior high schools. The questionnaires from 201 of these schools, serving 49,740 junior high school students, were abstracted, and the data thus acquired were used to analyze elective programs and to discover significant differences among elective programs. The data were grouped so that the significant differences were associated with the following four administrative variables: type of school, size of school, departmentalization, and guidance services.

It was found that health and guidance had the lowest incidence among students and French, art, industrial arts, home economics, and science were the five electives with the highest incidence. The number of electives offered the most frequently was eleven. Compulsory "elective" programs were found in 9.4 percent of the schools. Only one school provided more choice than the provincially recommended maximum. The mean

time allocation for elective study was 459 minutes per week; twenty-six schools had mean times below the provincially prescribed minimum and only two schools were above the provincially recommended maximum time allocation. The stated importance of the factors influencing programs of electives was consistent almost throughout the entire sample. From most to least important were: pupil interests, teacher qualifications and interests, school facilities, and community expectations.

Most of the significant differences among elective programs were associated with school size. On the basis of the significant differences, it was concluded that the larger the schools, the larger were the number of electives offered and elements of choice in elective programs. The number of electives offered was also found to be significantly greater in departmentalized schools. Elements of choice were found to be significantly greater in schools that provided extensive guidance services for their pupils.

The main discovery of this study was that more schools implemented elective programs whose characteristics were near the departmentally recommended minimum standards than programs of electives whose characteristics were near the departmentally recommended maximum standards.

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Chapter 1

INTRODUCTION TO THE STUDY

A statement found frequently in literature dealing with educational curricula, states that change is the only constant in education today. One can also find the statement that much of the proposed change is superficial since it is never really implemented to the extent that the prescribed objectives are reached. Davies (1969) stresses this charge and demands that there be a deceleration in the search for changes and an acceleration of the rate of implementation of changes already proposed. This seems to indicate a need for evaluation to determine the extent to which innovative elements have been implemented prior to evaluation which aims at determining how effectively innovative elements fulfil their prescribed objectives.

Implicit in this study is the assumption that the curricula of the past will not suffice as the curricula of today since the adolescent's self-concept, and hence his needs, has altered greatly because his social situation has altered. He knows more, socializes more, is exposed to more complexities and competitiveness, spends more and lives in more congested areas. In view of this, a need for change in the adolescent's program of studies in school has been recognized. Gwynn (1969:407)

expresses it thus:

. . . the junior high school curriculum is planned to meet the educational needs of a wide variety of young people while at the same time providing the basic subject competencies needed by all students.

A decreased emphasis on general education, or the core program, and an increased emphasis on study in the fine arts, the humanities, and the sciences on an elective, optional or exploratory basis is seen as an important aspect of the needed change in the adolescent's program of studies. This thesis represents an attempt to determine the nature of the implemented programs of electives in Alberta junior high schools since the Alberta Department of Education revised its program of electives and recommended it to the Alberta junior high schools.

STATEMENT OF THE PROBLEM

The Major Problem

As has been stated already, the purpose of this study was to answer the following question: what are the actual characteristics of the junior high school elective programs implemented under the prescriptions recommended by the Alberta Department of Education in 1969?

The Sub-problems

The major problem involved these five sub-problems:

1. What is the incidence of the electives recommended by the Alberta Department of Education for junior high schools?

2. What is the number of electives taught in the various junior high schools in Alberta?

3. What is the nature of the element of choice in the programs of electives in the various junior high schools in Alberta?

4. What is the amount of time spent by students in elective programs of study in the various junior high schools in Alberta?

5. What is the relative importance of the factors influencing the development of elective programs as seen by the principals of the various junior high schools in Alberta?

Delimitations of the Study

The prescriptions of the 1969 program of electives for Alberta junior high schools were taken from the Junior High School Handbook (1970), printed by the Alberta Department of Education. The types of junior high schools in operation in Alberta were found in the List of Operating Schools in Alberta (1970) compiled and printed by the Operational Research Branch of the Alberta Department of Education. In no instance were schools with less than ten teachers included in the study. This was done to ensure at least some possibility of providing the number of electives needed to allow some choice by the student.

The study was carefully delimited to a consideration of factors involving the administrative elements for instruction and excluded factors such as teacher qualifications, age, sex,

innovative elements of school design and personality factors.

Limitations of the Study

This study may be viewed only as a description of the nature of implemented programs of electives prescribed by the Department of Education in Alberta. It could not evaluate the individual electives, nor was it possible to estimate how effectively the programs of electives achieved their prescribed, or any other objectives. Since many schools cross-graded their electives, it was not possible to apply the aspects of this study to grades seven, eight, and nine as separate entities within the junior high schools.

OUTLINE OF THE STUDY

In attempting to examine the implemented programs of electives in the junior high schools, this study utilized a questionnaire administered to principals of junior high schools throughout the Province of Alberta.

Nature of Implemented Elective Programs

It was stated in the literature that changes in educational curricula are of little value unless they are implemented or put into effect. The nature of the implemented elective programs was studied in terms of:

1. The incidence of the electives recommended by the

Alberta Department of Education;

2. The number of electives taught in junior high schools;
3. The element of choice for students in planning their programs of electives;
4. The amount of time spent in the programs of electives by students; and
5. The perceived importance among principals of the factors influencing the development of elective programs.

The literature stated, furthermore, that the extent of implementation of a program of electives can be enlarged by administrative variables such as:

1. Type of school,
2. Size of school,
3. Guidance services, and
4. Departmentalization.

A major purpose of this study was to determine the differences in elective programs associated with each of these administrative variables.

Program of Electives

The term, elective, referred to a course that was not part of the core program and was chosen by a student as his desired course of study. The number of, and the time spent in, such courses by students in a given school at a given point in the school year constituted a program of electives.

Incidence of Electives

Incidence of electives referred to the number of students involved in and the number of schools teaching the electives recommended by the Department of Education.

Element of Choice

The element of choice was expressed in terms of the ratio of the compulsory "electives" to the number of electives that a student could study plus the ratio of the number of non-compulsory electives that the student could study to the number of electives from which the non-compulsory electives were selected. This resulted in an index of choice ranging from .190 to 1.000 where .190 represented a large element of choice for the student in planning his elective program and 1.000 represented complete compulsion.

Factors Influencing Elective Program Development

The importance of the following five factors was determined by asking the junior high school principals to rank the factors on a scale of one to five with one representing the factor with the greatest influence and five representing the factor with the least influence: school facilities, teacher qualifications, teacher interests, pupil interests, and community expectations.

Administrative Variables

Four school types, based on the grades present in the schools, were found to exist. Type 1 consisted of only junior high school grades (7, 8, and 9). Type 2 consisted of both junior high and senior high school grades (7 to 12). Type 3 consisted of both elementary and junior high school grades (1 to 9), and Type 4 consisted of elementary, junior high, and senior high school grades (k to 12).

School size consisted of three categories: small schools (0 to 134 pupils), medium-sized schools (135 to 299 pupils), and large schools (300 or more pupils).

Guidance services were measured in terms of the number of minutes of guidance services available from a counsellor per junior high school student per week.

Departmentalization referred to the extent to which a school utilized departments as administrative units responsible for instruction in a particular subject area such as English or physical education (Riggs, 1968:3). Departmentalization was expressed in terms of the number of department heads designated either formally or informally.

SIGNIFICANCE OF THE STUDY

Part of the significance of this study lay in the fact that very few descriptive studies of this nature have ever been

attempted in Alberta. Some prescriptive and descriptive literature is available from the United States and a brief summary of this literature in Chapter 2 will provide the background information and the conceptual framework for this study.

A look at the nature of elective programs implemented under departmental regulations, can further be deemed worthwhile in that it can provide an estimate of what Alberta junior high schools are attempting to do for the fulfilment of individual needs and interests. In fact, at the turn of the century, G. Stanley Hall, founder of the child-study movement, placed the individual and his needs at the core of the educational process. In his view the child must be allowed the freedom to find his own truth since "nothing else is so worthy of love, reverence and service as the body and soul of the growing child" (1901:24-25). Bowers (1969:179) deplores any preoccupation with educational matters that obscures the fact that "the individual must first possess the ability to perceive and respond from the depth of his own being before he can genuinely contribute to the social process." There is, in addition, an increased emphasis on the statement that student unrest lies in the irrelevance and uninteresting character of education. Education, U.S.A., formed in 1958, reports that, in order to alleviate student unrest, Montgomery County in Maryland has adopted a policy that stipulates that:

Students must be actively involved in the learning process. Therefore, in each course and at each grade level, students

shall be encouraged to participate in establishing course goals, suggesting interest areas, planning classroom activities, and in appraising the course (1969:31).

This study was also considered important on the grounds of its relationship to change. Davies (1969), as noted before, speaks out on the notion that many innovations are selected but not nearly as many are actually successfully implemented. That this may be the case for Alberta junior high school elective programs was a considerable source of motivation for the pursuit of this study. With so many new educational devices appearing constantly, assessment, both of their implementation and their effectiveness, becomes important and necessary.

ORGANIZATION OF THE THESIS

Chapter 2 contains a brief survey of the literature to serve as a background and conceptual framework for this study. Chapter 3 describes the research procedures used in this study. Chapter 4 provides an analysis of the data to describe the incidence, number of courses, element of choice, time, and the perceived importance of factors influencing the development of programs of electives. Chapter 5 provides an analysis of variance to look for significant differences between the various Alberta junior high school elective programs. Chapter 6 summarizes the analysis of data, suggests extensions for and concludes the study. The Bibliography and Appendices follow Chapter 6.

Chapter 2

REVIEW OF THE LITERATURE

In a paper on the topic of research in education, MacKay (1968:43) stresses that "theory is used as a framework for inquiry" and research programs should be so designed that the framework can be drastically modified if the data indicates the need for modification. Theory, he says, "should serve the researcher rather than being served by him." The aim of the following review of the literature was to provide a framework that would serve as a guide to inquiry and would assist in bringing about necessary changes in the framework itself.

HISTORICAL REVIEW

Elective courses have been in the junior high school since the inception of the junior high school as a separate part of the total education of the child. Bossing and Cramer (1965:29) report that in 1905, the National Education Association recommended in the report of its "Committee on a Six-year Course of Study" a "curriculum for the seventh and eighth grades, with 70 percent of the courses required and 30 percent elective." The program was outlined as shown in Table 1.

Davis (1924:8) states that the junior high school must have "certain elective subjects to be chosen by pupils." Cox

Table 1

An Early Junior High School Program
of Studies (NEA:1905)

Required subjects	30 min. periods per week
English.	6 - 8
Arithmetic	5
Geography and History.	5 - 7
Music.	2
Drawing.	2
Physical training (optional for well-developed children)	2
Elective subjects	30 min. periods per week
Manual training.	3
Science.	3
Foreign language	5

(1929:xviii - 13) demands that the curriculum in junior high schools be primarily determined or controlled by how the student "feels about what he learns." He emphasized that the stress on "knowledge and definite skills" should decrease while an increased emphasis should be placed on what the students "shall want to know, to do, and to be."

Noar (1953:201) suggests that the more highly specialized subject matter exist in the elective courses "from among which students choose one or two, depending on the type of organization designed by the faculty and administrators of the school."

The Cameron Commission on Education in Alberta in 1960, recommended that "the three-year program of each pupil include a minimum of three exploratory subjects. . ." (Clarke,1961:109).

Brimm (1963:91) describes a program of electives in terms of horizontal enrichment--going deeper into a given area. Allowing a student to skip some of the basic courses in the junior high school grades and giving him time for more electives would "provide a broader educational base." Brimm considers it a questionable practise to require all students, regardless of ability, to take a certain sequence of courses. He says (1963:86):

Every junior high school class will have pupils who could profitably skip certain basic courses and advance to others that offer them a greater challenge. This could mean that more electives could be offered so that the superior pupil could have a richer program, not only of the academic courses but also of the fine and practical arts that is often missed under our present organization.

Gwynn and Chase (1969:45) maintain that philosophical differences can be found in the various educational **situations**. According to their analysis, the program of electives arises from the philosophy of Existentialism and is based on the premise that on the part of the student, "each will work . . . to develop to his fullest potential because he wants to find out and know." Existentialist educators emphasize individual choice in curricula and tend to focus study on subjects such as art, music, literature, religion and moral ethics. Their methods advocate total commitment and prefer dependence on personal responsibility on the part of the student. Three of Gwynn's (1969:401) purposes of the junior high school program are:

1. the continuation of general education and common learnings in the subject matter fields;
2. the opportunity to explore subject areas not encountered before, including both creative and new subjects; and
3. the opportunity to start specialization if the student is ready for it.

The assumption that complete agreement exists among educators of the twentieth century regarding the need for elective programs is false. Conant (1960:16) recommends that the instructional programs in grades seven and eight be "essentially a required program for all pupils. Electives, generally, should not begin until grade nine." Reported by van Til, et al., (1960:67) is the statement that although there has been a slight trend toward more electives in the junior high school, "it is still true that the typical junior high school offers no

electives in the seventh grade, one in the eighth grade, and two in the ninth grade."

MAJOR CHARACTERISTICS OF A PROGRAM OF ELECTIVES

The following characteristics of elective programs are common to almost all of the literature surveyed:

Lack of a Research Basis

A survey of literature regarding curricular decisions reveals that current curricular decisions are not based, to any large extent, on scientific research. Goodlad (1969:368) expresses this when he writes: ". . . curriculum reform movement has been characterized by the refinement of curricula based on certain prior principles rather than research."

These prior principles are elaborated upon by Leonard (1946:124-135) in the following manner:

There is also the contention that the curriculum should be the outcome of research; in fact, we are emerging from a period in which this method of curriculum making was prominent. But the curriculum is partially a series of values, and these cannot be decided by science. The use of values is essential to the best guidance of learning.

The elective system, says Leonard (1946:16), was based upon the belief that "the student should have some part in determining what he should study." This opportunity to choose indicates faith in the student's intelligence to choose wisely. So far, it seems, a device to subject these principles or values to scientific research has not been developed.

Incidence of Electives

Studies showing how many students take which electives are almost non-existent in formal research projects involving junior high schools in Alberta. One can find writings which attempt to control the incidence of electives somewhat and in them one can see the reflection of principles of value rather than research. The Cameron Commission (Clarke, 1961:69,109) suggested that a junior high school student take a minimum of three elective courses during his three years in junior high school. These three electives (or more) should be selected from three fields of study:

1. art, music, and drama;
- 2, economics and industrial arts; and
3. other fields.

All junior high school students, it was recommended, should take at least one, but not more than two, courses from (1) and (2). One course should be taken from (3). This allows a student to select four electives from the areas of art, music, drama, economics and industrial arts and as many courses from other areas as possible.

Number of Electives

Implicit in a program of elective studies is an element of choice and inherent in an element of choice in a program of studies is a range of subjects from which to choose. The greater the number from which to choose a given number of courses, the greater

is the element of choice. Bossing and Cramer (1965:29) report that the National Education Association in 1905 described the junior high school program of studies as one in which there is "decidedly greater scope and richness of content than that of the traditional elementary school." Since Davis (1924:191) recognized the magnitude of individual differences among early adolescents, he wanted the junior high school program of electives to be "as broad as is feasible for effective accommodation of the needs of all students enrolled." Cox (1929:13), while not wishing to eliminate the core program completely, did suggest that at least some element of choice exist in most of the aspects of the junior high school program of studies. He said:

For all pupils there shall be curriculum enrichment through elective opportunities in sciences and mathematics, in language and literature, in music and art, in commercial, home-making, and industrial arts.

The Cameron Commission on Education in Alberta (1960) presented a minimum program for the junior high school pupil of only three electives, two of which could be selected from a group of only five courses. Brimm (1963:39) describes what he considers to be a situation of frequent occurrence when he says:

A broad range of elective courses is missing in the junior high schools. This lack of elective experiences must be compensated for by teachers in the individual classroom and by the extraclass program.

Element of Choice

Perhaps the highest degree of choice for students in their

instructional programs was recommended by Dewey (1916:180). In his rationale he stated that since there are no subjects which are interesting to all, no single kind of subject matter ought to be mastered by every student. All subjects should be available, since any student might prove interested in, and therefore capable of learning any of them. While available to all, however, they should be imposed upon no one.

Most of the literature surveyed does not advocate such an extensive element of choice. One of the recommendations of the National Education Association in 1905 stated that the junior high school program should have "some pupil choice of studies elected under supervision" (Bossing and Cramer, 1965:30). The reason for instituting an element of choice seems to lie in the need for adolescent students to have a period of exploration in which they can, according to Davis (1924:9), discover and understand their "capacities, interests and aptitudes." Davis (1924:163) defines the elective program as:

. . . the section of the curriculum devoted to the development of the special concerns of pupils, in which individual interests and aptitudes are explored and the requisite skills for each one are provided an opportunity for development.

Cox (1929:21) stresses that in the program of electives all compulsion should stop for "compulsion is almost certain to defeat the end that it seeks." Interest and effort, he says, are more than compatible, "they are indeed essential to each other."

Attempting to meet the individual needs and differences of students is an aspect of elective programs that has persisted

even in the most recent literature. Noar (1953:211) lists the following factors of individual differences as those of major concern in determining who takes which electives:

1. ability,
2. interest,
3. economic background, and
4. motivation and aspiration.

Gruhn (1960:7) criticizes junior high school programs of instruction because they have until recently concentrated on core programs and providing for individual differences was the problem of the individual teacher in the classroom. To Gruhn, this practice was especially inappropriate for junior high school students because "the predominate characteristic of early adolescents is that at no other age are children so different from each other."

Lehner (1970:805) suggests that the best way to meet the diversity of individual needs and interests is to design the curriculum so that it is negotiable. This means that the classroom events are a product of the demands of the students as they are met by the supply of teachers' abilities and the school's resources.

Another common reason for an element of choice in the program of studies for junior high schools is expressed by Gwynn and Chase (1969:401) as the "gradual and effective articulation for the student between educational levels." Brimm (1963:9) expresses this in terms of the unique function of the junior high school as an agency of transition from "the total life of the pre-adolescent to the new life of the young adult." This function

can be more specifically stated as the function of facilitating the transition from the "program of all required courses of the elementary school to the elective program of the senior high school" (Brimm,1963:9). The student's success in this transition increases in significance if one subscribes to the popular notion expressed by Storlie (1966:297) that the "primary goal of the secondary school is to increase the individual's responsibility for his own actions and increasing his self-direction toward worthwhile goals." Daily activities in the school could contribute to this goal, but if courses and their goals are imposed upon students, it is unlikely that students will assume much responsibility for their behavior. According to Lehner (1970:805), the school's goal should be to "turn out students who can recognize what they need to know and who can find for themselves the means for learning."

Time Allocation for Elective Programs

Although value systems, rather than scientific research, are the basis for time allocations, there is some uniformity of time allocations for the various elective programs. Although writers can be found who advocate that the total program of studies be elective, most of the literature resembles the recommendation of Davis (1924:191) that "possibly one-third of the school day" should be devoted to the program of electives.

ADMINISTRATIVE STRUCTURES FOR INSTRUCTION

The survey of literature revealed that very little research has been done to discover the relationship of administrative structures to the implementation of programs of studies. Generally, though, most related literature agrees with Noar (1953:116) that the characteristics of elective programs depend in part on "the type of organization designed by the faculty and administrators."

Brimm (1963) expresses concurrence with Noar by stating that the administrative organization for instruction places limitations upon any school program. It is necessary, therefore, that any organization for instruction provide maximal facilitation of the accomplishment of the objectives of the school. The four aspects of administrative organization that are described most frequently are type of school, size of school, departmentalization, and guidance services.

School Type

Except for the List of Operating Schools in Alberta, no literature describing the types of junior high schools and their programs of study in Alberta were found. Brimm (1963) reports that a dissatisfaction with the elementary school program led to the gradual development of the junior high school from the concept of the "8 - 4 plan" to a "6 - 6 plan." Around 1910, the intermediate school of the "6 - 2 - 4" and the "6 - 3 - 3" plans

gradually set the stage for the reorganization of the program itself. In 1963, Brimm says, there was a distinct trend toward the separate junior high school consisting of grades seven, eight, and nine. In the United States the "6 - 3 - 3" plan is more prominent in larger communities but in smaller communities the "6 - 2 - 4" or the "6 - 6" plan prevails. In terms of numbers of administrative units and in numbers of pupils served in 1963, the "6 - 6" plan was still the more popular one in the United States. According to van Til, et al. (1967:61), studies done in 1954 and 1964 show that approximately seventy-five percent of the "middle schools" consisted of grades seven, eight, and nine.

Size of Schools

Even a small school, according to Cox (1929:261), can offer many opportunities for "contacts with the great range of social backgrounds, aptitudes and experiences that are represented in the congeries of personalities which make up the student body." Cox does recognize, however, that it is "scarcely possible for even a good sized school of 1500 or 2000 pupils to offer more than a dozen or fifteen elective courses." Seventeen years later, Leonard (1946:63), made comments to the effect that "it is very difficult, indeed to offer the breadth of curricular program that should be given to the boys and girls in a small rural high school." Larger schools offer the basic core, but also, "usually offer a carefully selected list of electives suited more or less

to the needs of the pupils in the surrounding area."

Departmentalization

Part of the role of instructional departments in schools, as seen by Leonard (1946:514 - 516), is to study and interpret the school's proposed curricular innovations in terms of each subject area. Once these interpretations are clearly established, agreed upon and approved, each department should be asked to work out its materials for implementation. This implementation can be enhanced, says Leonard, if the departments hold "a number of discussions on curriculum innovations elsewhere, on proposals made for change by subject specialists and by curriculum workers" After this has been done, Leonard proposes that "basic decisions such as requirements for all pupils, relative time allotted to each department, and basic content of all required courses be determined by an over-all committee of the faculty with representatives on it from each department. . . ."

Departmentalization has always "been a key word in junior high school education" (van Til, et al., 1967:67). In the last two decades in the United States there has been a movement toward decreasing the practice of departmentalization in junior high schools. Brimm considers this decrease desirable (if junior high schools are to be a transitional device for early adolescents) but at the same time, not very likely. He says (1963:2) that "departmentalization began to replace the self-contained classroom of grades seven and eight when the ninth grade

classes were added to the intermediate school." Today, with the wide variety of administrative organizations, varying degrees of departmentalization exist. In the schools with only grades seven, eight, and nine, there is a trend to establish departmentalization to the same degree that it exists in the senior high school.

Guidance Services

At the time of Noar's writing and even as early as the writings of Cox, it was recognized that a truly elective program of studies would need effective guidance facilities to enable students to choose in their own best interest and needs rather than on the basis of where their peers would be or who the most popular teacher is. Cox (1929:21) says, "elective work should be preceded, if possible, and surely accompanied by constant educational guidance."

PREScribed ELECTIVE PROGRAMS IN CANADA

The purpose of this study was not to discover the extent of variation in elective programs in Canada. A brief examination of pertinent literature published by the Departments of Education across Canada serves to demonstrate the widespread agreement with many of the statements made above. In response to a letter to the Departments of Education (Appendix A) across Canada, the following information was obtained:

Province of British Columbia

The British Columbia document (1967:17) states that one of the purposes of the junior secondary school is to "provide an opportunity for pupils to begin more intensive study in one or more fields of interest." Moreover, the junior secondary school is to provide guidance to pupils and their parents so that "pupils may make an intelligent choice among educational programs." The junior secondary program includes grades eight, nine and ten. The kind of program "envisaged" for grade eight students is almost completely a common program for all students. Grades nine and ten provide opportunities for pupils to take "preliminary courses in fields of interest" through "alternatives and electives." It is recommended that grade eight students spend up to twelve percent of their instructional time in elective study consisting of instruction in five general areas: agriculture, art, music, industrial education or home economics, and languages other than French. Grades nine and ten may spend up to twelve percent of their instructional time in elective studies chosen from the following six areas: languages other than French, agriculture, industry, commerce, services, and fine arts. These six electives are considered to be qualifying options for specific programs in the senior secondary school. In addition, these students may spend up to twelve percent of their instructional time in two, three, or four courses selected from a list of twenty-five possible areas of study corresponding in many aspects to the list

in the Junior High School Handbook of the Alberta Department of Education.

Provinces of Saskatchewan and Manitoba

The provinces of Saskatchewan and Manitoba responded by letter (Appendix A) rather than by sending their publications. Saskatchewan does not have any elective subjects for junior high school students. Home economics and industrial arts are "programs designed essentially for girls and boys" respectively. The Department of Education in Manitoba indicated that grades seven and eight spend all of their time, except twelve percent, in assigned study. Eight of the twelve percent is spent in studying a second language and the remaining four percent is unassigned time as far as the Department of Education is concerned. Grade nine has six percent of the instructional time unassigned and twenty percent of the instructional time in elective study in which a student shall elect to study a minimum of two electives selected from the following eight electives: French, Latin, German, Ukrainian, art, music, industrial arts and home economics.

Province of Ontario

The Department of Education in Ontario (1970 - 71) allows grade nine students to choose one or two of seven elective areas of study. The division of time between obligatory and optional studies in grade nine is "approximately eighty percent and

twenty percent" (1970:17). Table 2 summarizes the recommended grade nine elective program as regarding the number of electives to be offered and the time to be allotted to it. A caution was that optional courses be offered only if it is sound to do so, which means that it is selected by a reasonable number of students, taught by a teacher well-equipped to do so, and based on a proper course of study and suitable school facilities.

Province of Quebec

The letter from the province of Quebec states that the current compulsory junior high school program will slowly be replaced by a more elective program, beginning in January, 1972.

Province of Prince Edward Island

The letter from Prince Edward Island states that a total of five electives should be offered by its junior high schools: music, physical education, art, home economics and French. "Schools decide how best to allocate time in relation to the program authorized by this Department."

Province of New Brunswick

The document received from New Brunswick (1968) states that two distinct junior high school programs exist: the regular and the modified. The first year of the two programs is undifferentiated and contains no electives. The regular program, after the first year, may be enriched by industrial arts and home economics taking up to fifteen percent of the instructional time.

Table 2

Recommended Courses and Time Allocations for
Electives, Province of Ontario, 1970

Elective subjects	45 min. periods per week
Art.	4 - 5
Music.	4 - 5
Industrial arts, Technology. . . .	4 - 5
Home economics	4 - 5
Agriculture, Environmental science.	4 - 5
Typewriting.	4 - 5
Any authorized subject from any program or grade within this branch for which prerequisites can be met	4 - 5

Table 3

Recommended Courses and Time Allocations for
Electives, Province of Nova Scotia, 1970

Elective subjects	Percent time allocated		
	Grade 7	Grade 8	Grade 9
Music.	6 - 10	6 - 10	6 - 10
French	9 - 12	9 - 12	9 - 12
Ind. arts/Home econ.	9 - 12	6 - 10	9 - 12
Art.	6 - 10	6 - 10	6 - 10
Mathematics.			15
Latin.			9

Once schools offer elective programs, it is the function of the guidance services to be a "placement service" for the students (1968:44).

Province of Nova Scotia

The Department of Education in Nova Scotia (1970 - 71) recommends that grade seven and eight students take no less than one elective and grade nine students at least two. Students in grades seven and eight select their electives from a group of four electives while grade nine students choose from a group of six electives. Grade seven and eight students, at minimum spend six percent of their instructional time in elective study, while grade nine students spend a minimum of twelve percent in elective study. Table 3 shows the number of electives and time allocations for junior high schools in Nova Scotia. Adjustments may be made in these time prescriptions when it is demonstrable that the changes are to the educational advantage of the students.

Province of Newfoundland

The letter received from the Department of Education in Newfoundland shows that a total of nine electives exists for students in grades seven, eight and nine. These nine electives (Appendix A) are:

art	Latin
industrial arts	Spanish
music	home economics
French	educational drama
German	

Suggested time allocations were discontinued in Newfoundland in 1969.

PRESCRIPTIONS OF THE ALBERTA DEPARTMENT OF EDUCATION

Since 1969, the Department of Education in Alberta has prescribed a junior high school program of electives that takes most of the above ideas into account.

Incidence of Electives

The Department of Education attempts to increase the number and incidence of electives in the schools by stating that each year, the students in junior high schools may select one of the following elective programs:

1. four Group A options,
2. three Group A options and one Group B option,
3. two Group A and two Group B options,
4. one Group A option and three Group B options.

Table 4 provides the maximum and minimum time allocations for each of the above four elective programs. The concept of Group A and Group B options will be described below.

Number of Electives Taught

The prescribed program of electives recommends that a total of twelve electives be taken by a student during the years of his junior high school education. Twenty different areas of elective study are recommended. Group A options are courses of

Table 4

Minimum and Maximum Time Allocations for
 Elective Programs in Alberta Junior
 High Schools, 1970 - 71

Elective programs	Prescribed min. per week	
	Minimum	Maximum
4 Group A options	480	700
3 Group A, 1 Group B	435	700
2 Group A, 2 Group B	380	700
1 Group A, 3 Group B	345	700

cultural and practical arts which include the following possibilities:

agriculture	industrial arts
art	Latin
arts and crafts	music (general)
drama	music (choral)
French	music (instrumental)
German	typewriting
home economics	Ukrainian

Group B options, which are academic options, include the following possibilities:

language arts	physical education/health
languages (not English)	science
mathematics	social studies

Element of Choice

The Department of Education (1970:8) states that the content of electives may be adapted to the interests of students, the needs of the community and the abilities of the teacher. "Choice of options from the range offered should be made by the pupil. Guidance should be made available to him for this choice."

Time Allocation

Different time allocations exist for each group of options. The Group A options have a time allocation of 120 to 175 minutes per week. The Group B options have a time allocation of seventy-five to 175 minutes per week. The minimum time allocation allowed per pupil per week in elective studies would be a program of one Group A option and three Group B options, all offered at the minimum time allocation. This would involve a total of 345 minutes per week. The maximum time allocation

allowed per pupil per week in elective study would be a program of 700 minutes, involving any one of the four elective programs described above, all offered at maximum time. Table 4 provides the minimum and maximum time allocations per week for each of the four programs of elective study recommended by the Department of Education in Alberta.

SUMMARY

The review of the literature concerning elective programs highlighted the four criterion variables of incidence, number, choice, and time allocation as applied to a survey of elective programs implemented under departmentally prescribed recommendations. Four categorical variables were also highlighted: type of school, size of school, departmentalization, and guidance services.

Finally, the review of literature included a brief description of departmentally prescribed programs of electives across Canada and a more extensive description of the program of electives prescribed by the Department of Education in the province of Alberta.

Chapter 3

RESEARCH DESIGN

The problem dealt with in this study came about as a result of constant self-evaluation and evaluation by in-service of the program of electives in junior high schools in the Edmonton Public School System. The frequency of occurrence of statements like that of John Verduin (1967:32) was closely associated with the undertaking of this study. Verduin writes:

History reveals that recommendations for change and prescribed curricula handed down from outside experts have not been completely accepted nor effectively utilized in the past. If the educator does not have an active part in effecting change and does not know the rationale behind it, it will have less meaning and interest for him Curriculum changes handed down by experts are not likely to be implemented.

The problem was delimited to variations related to administrative structures for instruction as soon as the magnitude of other variables such as teacher qualifications, semestering, and cross-grading became apparent.

THE INSTRUMENT

Design

The use of the four administrative structures for instruction as categorical variables arose out of the survey of the literature as described in Chapter 2. Since no study of this

nature was readily available, the research instrument had to be developed without the use of a guiding model. Because Mr. Donald Barnett, a graduate student in Educational Administration, was conducting a study on the core program of studies in Alberta junior high schools using the same sample as was used for this thesis, the instrument became a jointly developed questionnaire. The development of the general design of the questionnaire and some of the items as well, was aided by three documents:

1. Deutscher's (1965) unpublished master's thesis, "Time Allocations and Scheduling Practices in Alberta Junior High Schools;"
2. The National Study of Secondary School Standards (1963), Evaluative Criteria for Junior High Schools; and
3. The A-Forms (Appendix B) filled in each year by Alberta secondary school principals for the provincial Department of Education.

Prior to the printing of the questionnaire, it was studied by Dr. C. S. Bumbarger, faculty advisor for this study, Dr. J. Hrabí, Director of Curriculum in the Alberta Department of Education, and the assistant superintendent of schools for the County of Strathcona. The suggestions for revision of the instrument were duly incorporated.

Validation

Validation of the instrument was done by distributing the

questionnaire to twelve Edmonton junior high school principals for advance completion. This was facilitated by Dr. E. Mansfield, Director of Research for the Edmonton Public School System. After completing the questionnaire, these twelve principals met with Mr. Barnett, the writer and Dr. Mansfield in a conference during which the questionnaire was discussed and evaluated (Appendix B). Numerous suggestions came forth and those dealing with the design of the instrument were duly considered and implemented.

THE SAMPLE

The Population

The population consisted of the junior high schools in Alberta which fit into one of the following categories:

1. junior high school grades only, including schools with grades seven, eight, and nine; grades seven and eight; and grades eight and nine;
2. junior-senior high school grades including schools with grades seven to twelve and grades eight to twelve;
3. elementary-junior high school grades including schools with grades one to nine and grades one to eight;
4. elementary-junior-senior high school grades including schools with grades one to eleven and grades one to twelve. One or two schools had a Kindergarten department as well.

The Sample

The actual number of schools asked to participate in

this study was 300. All seventy-nine schools having only junior high school grades were included. Only those junior-senior high schools (fifty-three) with ten or more teachers were included. The elementary-junior high schools asked to participate were eighty-six schools selected from the population with the use of tables of random number (Meredith, 1967:315 - 319). All eighty-two of the elementary-junior-senior high schools with fifteen or more teachers were selected for participation. The schools were identified for selection and mailing by reference to the List of Operating Schools in Alberta (1970 - 71). The actual distribution of participating schools by categorical variables is shown in Table 5 which includes useable returns only.

The Respondents

Of the 300 principals selected for participation in this study, 212 (70.7 %) returned completed questionnaires. Eleven of these returns were discarded because of unsuitable or incomplete responses to items. The remaining 201 questionnaires (67.0 %) were abstracted for analysis.

DATA

Collection

Early in 1970, the Edmonton Public School Board, the Edmonton Separate School Board, the St. Albert Separate School Board, and the County of Strathcona granted permission for the study to be conducted in their junior high schools. The

Table 5

Distribution of Participating Schools by Categorical Variables:
Type, Size, Departmentalization, and Guidance Services

School type Category	No.	School size			Department heads				Guidance services			
		Small	Medium	Large	None	1 to 3	4 or 5	6 to 8	None	Limited	Mod.	Ext.
1	48	0	9	39	16	7	12	13	8	3	19	19
2	38	8	21	9	26	7	3	2	9	13	9	7
3	56	20	23	13	34	10	5	7	14	15	9	17
4	59	42	17	0	53	5	0	1	22	20	12	5
N =	201	70	70	61	129	29	20	23	53	51	49	48

Type: 1 = junior high school grades only

2 = junior-senior high school grades

3 = elementary-junior high school grades

4 = elementary-junior-senior high school grades

Guidance: Limited = .001 to 1.599

min. per student weekly

Moderate = 1.600 to 2.599

min. per student weekly

Extensive = 2.600 plus

min. per student weekly

Size: Small = 0 to 134 junior high school students

Medium = 135 to 299 junior high school students

Large = 300 plus junior high school students

remaining school boards did not require the submission of advance requests for formal permission to conduct research in their schools. Within three weeks after the mailing date, the 212 questionnaires had been returned, abstracted or rejected from this study.

ANALYSIS OF DATA

Coding of the Data

Since the questionnaires were prepared for two research projects, they had to be abstracted onto forms (Appendix C) from which the data could be directly transcribed onto IBM computer punch cards. These permitted the use of prepared computer programs to analyze the data in accordance with the problem.

Non-statistical Analysis

Frequency distributions were mostly compiled by hand as the questionnaires were returned. Percentage frequencies were calculated either by hand or by calculator. A special computer program was written for the compilation of the incidence of electives (Appendix C).

Statistical Analysis

Eight statistical analyses by computer were run. The first four provided parametric analysis of variance between the subgroups formed on the basis of each of the four categorical variables.

As regarding school type, the data were grouped into the

four categories based on the grade levels present in the school. As regarding school size, the data were grouped into three subgroups: small (schools which served up to 134 students in the junior high school grades), medium (schools which served from 135 to 299 junior high school students), and large (schools which served more than 299 junior high school students). As regarding departmentalization, the data were grouped into two groups: those with no department heads and those with some department heads. The latter group was subdivided further into three groups: those with one to three department heads, those with four or five department heads, and those with six to eight department heads. Table 6 depicts the frequency of schools with the various levels of departmentalization. As regarding guidance services, the data were grouped into four groups on the basis of the number of minutes of guidance services available to each junior high school pupil in the school per week. Those schools with no organized guidance services comprised the first group. The second group consisted of schools with a limited amount of guidance services (.001 to 1.599 minutes per student per week). The third group contained schools with moderate amounts of guidance services (1.600 to 2.599 minutes per student per week) and the fourth group had schools with extensive guidance services (more than 2.600 minutes per student per week). The distribution of schools in each of these subgroups is tabulated in Table 5. The remaining four statistical analyses by computer were

Table 6

Distribution of Participating Schools
with Some Departmentalization

No. of department heads	No. of schools
1	11
2	9
3	9
4	14
5	6
6	18
7	3
8	2
Total	72

non-parametric analyses of variance by the Kruskal-Wallis test to discover significant differences in the cases where the index of homogeneity of data was not appropriate for parametric analysis of variance. The groupings for these non-parametric analyses were the same as the groupings for the parametric tests. Two factors were of primary concern in establishing the cut-off points which determined inclusion in a particular category or subgroup. First, the groups had to be large enough for parametric analysis (approximately 40 in each group) and, secondly, the groups had to be approximately equal in size.

Each of the eight statistical analyses included an analysis of variance between subgroups as regarding the perceived relative importance of the following five factors influencing the development of elective programs in the junior high school: school facilities, teacher qualifications, teacher interests, pupil interests, and community expectations.

Chapter 4

DESCRIPTIVE ANALYSIS OF DATA

This chapter provides a non-statistical analysis of the data collected to describe the incidence, number, element of choice, time allocation, and the perceived importance of factors influencing the development of electives in junior high schools functioning under the prescriptions of the Alberta Department of Education.

INCIDENCE OF SUGGESTED ELECTIVES

The first sub-problem listed in Chapter 1 was: "What is the incidence of the electives recommended by the Alberta Department of Education for junior high schools?" Incidence of electives was defined as the number of students involved in and the number of schools teaching the prescribed electives.

Incidence by Students Involved

Table 7 provides the incidence of the recommended electives by the number and percent of students involved in each of them. From Table 7, it can be seen that of the 49,740 students included in the sample of this study, less than one percent were studying health and guidance. German, Ukrainian, and agriculture were taught to more than one, but less than five percent of the students. More than five, but less than ten percent of the

Table 7

Incidence of Electives by Students
and Schools Involved

Name of electives	By students		By schools	
	Number	Percent	Number	Percent
French	23,124	46.5	165	82.1
Art.	19,771	39.8	153	76.1
Industrial arts. . . .	16,105	32.4	158	78.6
Home economics	15,533	31.2	158	78.6
Science.	14,638	29.5	164	81.6
Drama.	14,431	29.1	145	73.2
Social studies	14,033	28.2	175	87.6
Language arts.	12,681	25.5	156	77.6
Mathematics.	10,025	20.2	133	66.1
Typewriting.	7,160	14.4	89	43.4
Music (general). . . .	5,583	11.3	76	37.4
Music (instrumental) .	5,558	11.2	60	29.9
Physical education . .	5,511	11.1	69	34.4
Arts and crafts. . . .	5,075	10.2	58	28.5
Others	4,711	9.5	87	43.3
Music (choral)	2,947	5.9	36	17.9
Agriculture.	1,666	3.3	36	17.9
Ukrainian.	832	1.8	20	9.9
German	593	1.1	15	7.5
Health	409	0.8	8	3.9
Guidance	116	0.2	3	1.5
Latin.	0	0.0	0	0.0
N =			49,740	201

students were studying choral music and a group of electives labelled as "others," described later in this chapter. The following subjects were taught to more than ten, but less than fifteen percent of the students: arts and crafts, physical education, instrumental music, general music and typewriting. Language arts and mathematics were taught to 25.5 and 20.2 percent of the students respectively. From twenty-six to 29.5 percent of the students were studying social studies, drama, and science. Industrial arts and home economics involved from 31.2 to 32.4 percent of the students included in this study. Finally, art was taught to 39.8 percent and French to 46.5 percent of the students. French, art, industrial arts, home economics, and science were the five subjects with the highest incidence, while agriculture, Ukrainian, German, health, and guidance were the five electives with the lowest incidence. Latin was the only elective listed in the Junior High School Handbook (1970) of the Alberta Department of Education that had no incidence at all in the schools participating in this study.

Incidence of Electives by Schools Involved

Table 7 also provides the incidence of electives by the number of schools that were teaching the recommended elective. Only health and guidance were taught by less than five percent of the schools. Ukrainian and German were taught in more than five, but less than ten percent of the schools. Choral music,

agriculture, arts and crafts, and instrumental music were taught by over twenty-five, but less than thirty percent of the schools. General music and physical education were taught in thirty to forty percent of the schools, and electives labelled as "others" and typewriting were taught by more than forty, but less than fifty percent of the schools. Mathematics and drama were taught by more than sixty-five, but less than seventy-five percent of the sample's schools. Over seventy-five percent of the schools taught language arts, industrial arts and home economics while over eighty percent of the schools in the sample taught science, French and social studies. Significant to note, perhaps, is that French had the highest incidence by number of students involved, but social studies had the highest incidence by number of schools involved. Science changed from fifth to third in order of highest incidence, while language arts moved up two places and art moved down four places in order of rank.

Incidence of "Other" Electives

The questionnaire sent to the principals included in this study, requested that the electives be listed in as general a manner as possible (preferably in the same areas of study as listed in the Junior High School Handbook, 1970, of the Alberta Department of Education). This was done by most of the respondents, but in the cases where it was not done, and could not be done by the researcher without including the same students twice in the same general area of study, the label of "other

electives" became necessary. Table 8 provides the incidence of the electives labelled as "others."

These other electives involved 4,711 students in eighty-seven schools. The five other electives with the highest incidence by number of students involved were: reading, student activities, vocational education, biology and psychology. Other significant observations from this analysis were:

1. German, Ukrainian and Spanish were the only three languages taught, other than French and English, by the schools involved in this sample;
2. only two schools included in the sample taught the elective called "Family Life;" and
3. two schools listed religious instruction as an elective.

NUMBER OF ELECTIVES

The second sub-problem listed in Chapter 1 was: "What is the number of electives taught in the various junior high schools in Alberta?" The study did not attempt to determine the number of electives taught to grades seven, eight and nine as separate entities. As has been noted, in Chapter 2, the Junior High School Handbook (1970) of the Alberta Department of Education presents a list of twenty possible electives.

A total of more than twenty electives appeared in only four of the junior high schools included in the sample. This was made possible by offering some of the "other electives" already

Table 8

Incidence of "Other Electives" by Students and Schools Involved

Name of elective	Students	Schools	Name of elective	Students	Schools
Aborigines.	30	1	Economics.	281	5
Advertising.	156	1	Embryology.	60	1
Anthropology.	13	1	Family life.	379	2
Astronomy.	177	3	Film study.	44	2
Aviation.	116	2	Finance.	28	1
Audio-visual.	38	1	Fine arts.	25	1
"B" option.	294	1	French literature.	38	1
Biology.	565	12	Genetics.	60	1
Business.	83	2	Geography.	309	9
C. F. L.	60	1	Geology.	127	5
Combustion fuels.	30	1	Geometry.	126	2
Community economics.	205	6	History.	257	6
Concert band.	16	1	History of art.	49	2
Creative writing.	305	11	Humor.	60	1
Debate.	105	2	Hunter training.	133	1
Driver education.	22	1	Language.	38	1
Ecology.	62	3	Law.	29	1

Table 8 (continued)

Name of elective	Students	Schools	Name of elective	Students	Schools
Library science.	137	8	Public speaking.	103	4
Literature	312	9	Reading.	1,680	23
Machines	60	1	Recreation	86	2
Mass media	60	1	Religious instruction.	632	2
Mathematics.	237	6	Service.	95	4
Measurement/Drafting	30	1	Social problems.	254	8
Mechanics.	29	1	Sociology	701	17
Microbiology	30	1	Spanish.	82	2
Mythology.	29	1	Special projects	161	6
Newspaper science.	32	1	Student activities	770	3
Outdoor education.	37	1	Student newspaper.	60	1
Philosophy	14	1	Surveying.	30	1
Photography.	254	6	Vocational education	710	2
Physics	292	6	World culture.	24	1
Play writing	30	1	Wrestling.	29	1
Psychology	401	10	Written French	253	3
			N =	4,711	87

described. The number of electives most frequently taught (17.4 % of the schools) was eleven. The mean number of electives taught was 10.6, the standard deviation was 3.45. Only one school (0.5 %) offered less than five electives. On the other hand, only 5.3 percent of the participating schools offered a total number of electives in excess of fifteen. Ten or more electives were offered by 43.9 percent of the participating schools.

ELEMENT OF CHOICE

The third sub-problem listed in Chapter 1 was: "What is the nature of the element of choice in the programs of electives in the various junior high schools in Alberta?" The element of choice in a program of electives was defined as the sum of the ratio of the compulsory "electives" to the number of electives studied and the ratio of the non-compulsory electives to the number of non-compulsory electives offered. The resulting ordinal value was called an index of choice.

The indices of choice ranged from .190 to 1.000. The higher the index, the lower the element of choice. This meant that an index of choice of 1.000 represented a program of "electives" that was completely compulsory. According to the Junior High School Handbook (1970), the recommended highest element of choice would be represented by an index of .200 since it is recommended that a student study four electives during the school year, selected from a total of twenty non-compulsory

Table 9

Frequency Distribution of the Number
of Electives Taught

Number of electives	Frequency	% frequency
More than 19	4	1.9
19	3	1.4
18	0	0.0
17	1	0.5
16	3	1.4
15	6	3.0
14	14	6.9
13	9	4.5
12	22	10.9
11	35	17.4
10	29	14.6
9	24	11.9
8	21	10.4
7	13	6.4
6	9	4.4
5	7	3.9
Less than 5	1	0.5
Totals	201	100.0

Mean number = 10.5

S. D. = 3.45

electives. Table 10 shows the actual frequency distribution of indices of choice among the schools that participated in this study. The mean index of choice was .640 and the standard deviation was .206. Only one school (0.5 %) had a higher element of choice than the maximum departmental recommendation. Nineteen schools (9.4 %) had elective programs that were really completely compulsory. Seventy-two schools (35.8 %) had indices of choice between .400 and .599. Indices of choice below .699 occurred in 124 schools (61.5 %).

Incidence of Compulsory Electives

Incidence of electives was also tabulated by the percent to which the electives were taught on a compulsory basis. A compulsory elective was defined as an elective that a student had to take; individual electives were considered to be compulsory if they were taken by everyone in a grade. Table 11 depicts the incidence of electives, listed by the percentage of students involved in the electives by compulsion.

Less than five percent of the students taking choral music, instrumental music, and Ukrainian did so by compulsion. More than five, but less than ten percent of the students enrolled in mathematics and science were enrolled by compulsion. From eleven to fourteen percent of the students studying art, arts and crafts, German, and drama were compelled to do so. Seventeen to twenty-six percent of the students studying French, social studies, language arts and general music did so by compulsion. Thirty

Table 10

Frequency Distribution of
Indices of Choice

Indices of choice	Frequency	% frequency
.100 to .199	1	0.5
.200 to .299	3	1.4
.300 to .399	21	10.4
.400 to .499	36	17.9
.500 to .599	36	17.9
.600 to .699	27	13.4
.700 to .799	24	11.9
.800 to .899	21	10.4
.900 to .999	13	6.4
1.000	19	9.4
Totals	201	99.6

Mean = .640
S. D. = .206

Table 11

Incidence of Compulsory Electives by the
Percentage of Students Involved
by Compulsion

Name of elective	<u>Number of students involved</u>		% of students by compulsion
	Total	By compulsion	
Guidance	116	92	79.4
Others	4,711	3,430	72.8
Industrial arts	16,105	11,340	70.4
Home economics	15,533	10,797	69.1
Agriculture	1,666	919	55.1
Physical education	5,511	1,677	30.4
Health	409	123	30.1
Typewriting	7,160	2,153	30.1
Music (general)	5,583	1,445	26.0
Language arts	12,681	2,952	23.3
Social studies	14,033	2,734	19.4
French	23,124	4,101	17.7
Drama	14,431	2,021	14.0
German	593	92	13.3
Arts and crafts	5,075	625	12.3
Art	19,771	3,284	11.6
Science	14,638	1,413	9.7
Mathematics	10,025	905	9.0
Ukrainian	832	38	4.6
Music (instrumental)	5,558	205	3.7
Music (choral)	2,947	60	2.3
Latin	0	0	0.0
N =	49,740		

percent of the students in typewriting, health and physical education were there by compulsion. Fifty-five to seventy percent of the students studying agriculture, home economics and industrial arts were compelled to do so while seventy-two to seventy-nine percent of the students in "other electives" and guidance were there by compulsion. Significant, perhaps, is the fact that the elective, guidance, with the lowest incidence, was most compulsory.

Incidence of Compulsory "Other Electives"

Finally, the incidence of compulsory "other electives" was tabulated in Table 12. Four of the "other electives", hunter training, religious instruction, student activities, and vocational education were compulsory for 100 percent of the students enrolled in them. Over fifty-two percent, but less than fifty-five percent of the students taking reading and community economics did so by compulsion. Between thirty and thirty-five percent of the students studying public speaking and geography did so by compulsion. Less than twenty-five percent of the students enrolled in literature, economics, and geology were involved by compulsion. The reader must be careful to remember, however, that these "other electives" may also occur in some of the departmentally recommended electives, and, as such, they may also have been enrolling students on a compulsory basis.

Table 12

Incidence of Compulsory "Other Electives"
by the Percentage of Students
Involved by Compulsion

Name of elective	Number of students involved		% of students by compulsion
	Total	By compulsion	
Hunter training	123	123	100.0
Religious educ.	632	632	100.0
Student activities	770	770	100.0
Vocational education	710	710	100.0
Reading	1,680	881	52.4
Community economics	205	109	52.2
Public speaking	103	33	32.0
Geography	309	93	30.1
Literature	312	75	24.0
Economics	281	71	22.3
Geology	127	22	17.3
N =	4,711		

TIME ALLOTTED TO ELECTIVE PROGRAMS

The fourth sub-problem listed in Chapter 1 was: "What is the amount of time spent by students in elective programs of study in the various junior high schools in Alberta?" Time was measured in terms of the total number of minutes per week that students spent in elective study in a given school. According to the Junior High School Handbook (1970) of the Alberta Department of Education, a student in junior high school should spend a minimum of 345 minutes per week in elective study. Similarly, a student should not spend more than 700 minutes per week in elective study.

Table 13 shows the frequency distribution of amounts of time allotted for elective study among the junior high schools of Alberta included in this study. The mean amount of time spent in elective programs of study was 459 minutes per week. The standard deviation from the mean was 93.

Twenty-six schools (12.9 %) allotted a minimum or less than the minimum amount of time for elective study as compared with the recommendations of the Department of Education. Two schools, or 1.0 percent, were above the maximum time limit set by the Department of Education. There were 173 (85.9%) schools whose time allotted for elective study was within the time limits set by the Department of Education. Time allocations between 400 and 500 minutes per week for elective study were found in 101 (50.3 %) schools.

Table 13

Frequency Distribution of Amounts of
Time Spent in Elective Programs

Amounts of time (min. per wk.)	Frequency	% frequency
200 to 249	2	1.0
250 to 299	0	0.0
300 to 349	24	11.9
350 to 399	13	6.4
400 to 449	52	25.9
450 to 499	49	24.4
500 to 549	31	14.9
550 to 599	7	3.9
600 to 649	18	9.0
650 to 699	3	1.4
700 plus	2	1.0
Totals	201	99.8

Mean = 459

S. D. = 93

Incidence of Electives by Time Allotted

The electives were tabulated by the mean time spent in them by students. All of the mean times, except for guidance and Latin (which was not taught), were within the provincially prescribed time limits. Guidance had a mean time of forty minutes less than the minimally prescribed time. The highest mean time allotted was for home economics and industrial arts (128 minutes per week) while the lowest mean time allotted was for health, science, and the electives labelled as "others" (106 minutes per week). Table 14 shows the incidence of electives by the time allotted to them.

Fifty percent of the departmentally recommended electives (11 in number) were not taught by any school at, or above, the provincially recommended time limits. Of the remaining eleven electives, not one of them was taught at, or above, the maximum time limits by more than 6.7 percent of the schools teaching them. Of the provincially recommended electives, 68.2 percent were taught within the provincial time limits by no more than forty percent of the schools. The remaining 31.8 percent of the provincially recommended electives were taught within the provincial time limits by seventy-five or more percent of the schools. Fifty percent of the provincially recommended electives (11 in number) were taught at, or below, the provincial minimum time limits by sixty-five percent (or more) of the schools teaching them.

Table 14

Incidence of Electives by the Time
Allotted to Each Elective

Name of elective	Time limits							
	Limits by Province	Mean	1		2		3	
			f	% f	f	% f	f	% f
Home economics	120 - 175	128	91	63.9	67	36.1	0	0.0
Industrial arts	120 - 175	128	93	65.9	64	33.5	1	0.6
Music (instrument.)	120 - 175	124	36	60.0	20	33.3	4	6.7
French	120 - 175	122	110	66.7	51	30.9	4	2.4
Ukrainian	120 - 175	120	13	65.0	6	30.3	1	5.0
Art	120 - 175	119	114	75.1	38	24.2	1	0.7
Drama	120 - 175	119	104	71.7	41	28.3	0	0.0
Music (general)	120 - 175	119	64	84.2	12	15.8	0	0.0
Typewriting	120 - 175	119	63	70.7	24	27.0	2	2.3
Agriculture	120 - 175	117	32	88.9	4	11.1	0	0.0
Music (choral)	120 - 175	117	24	66.7	12	33.3	0	0.0
Arts and crafts	120 - 175	114	45	75.7	12	22.6	1	1.7
German	120 - 175	114	9	60.0	6	40.0	0	0.0
Physical education	75 - 175	113	4	5.8	64	92.8	1	1.4
Mathematics	75 - 175	111	10	7.5	123	92.5	0	0.0
Language arts	75 - 175	108	9	5.8	145	92.9	2	1.3
Health	75 - 175	106	2	25.0	6	75.0	0	0.0
Others	75 - 175	106	7	8.0	79	90.9	1	1.1
Science	75 - 175	106	7	4.3	157	95.7	0	0.0
Social studies	75 - 175	105	9	5.1	166	94.9	0	0.0
Guidance	120 - 175	80	2	66.7	1	33.3	0	0.0
Latin	120 - 175	0	0	0.0	0	0.0	0	0.0

1 = at or below the provincial minimum

2 = within the provincial limits

3 = at or above the provincial maximum

IMPORTANCE OF FACTORS INFLUENCING THE DEVELOPMENT OF ELECTIVE PROGRAMS

The fifth sub-problem listed in Chapter 1 was: "What is the relative importance of the factors influencing the development of elective programs as seen by the principals of the various junior high schools in Alberta?" The perceived relative importance of the six factors was determined by asking the junior high school principals to rank them on a scale of one to six, where one represents the position of highest importance and six represents the position of least importance. Chapter 2 noted that the Junior High School Handbook (1970) of the Alberta Department of Education states that the content of electives may be adapted to the interests of the students, the needs of the community and the abilities of the teacher. The survey of literature also supported the statement that school facilities are a definite factor in implementing a program of electives. The possibility that other factors may exist was included as a sixth factor labelled as "other factors."

Table 15 shows the frequency distribution of the rankings done by the principals. Pupil interests was the factor that received the largest number (74) of first place and the largest number (62) of second place ranks. Teacher interests received the largest number (54) of third place ranks, and school facilities received the largest number (78) of fourth place ranks. Finally, community expectations received the largest number (146) of fifth

Table 15

Frequency Distribution of Rankings of Factors
Influencing the Implementation of
a Program of Electives

Factors	Rankings					
	1	2	3	4	5	6
School facilities	27	31	41	78	22	2
Teacher qual.	54	44	52	35	14	2
Teacher interests	37	54	54	43	11	2
Pupil interests	74	62	46	13	6	0
Community expect.	0	7	7	23	146	18
Other factors	9	3	1	9	2	177
Totals	201	201	201	201	201	201

1 = most important
6 = least important

place ranks, and "other factors" received the largest number (177) of sixth place ranks.

This distribution generally reflects the relative importance of the six factors as seen by the mean rank of each factor. Pupil interests had the first place mean rank (2.09); teacher qualifications had the second place mean rank (2.59); teacher interests had the third place mean rank (2.67); school facilities had the fourth place mean rank (3.21); community expectations had the fifth place mean rank (4.80); and "other factors" had the lowest rank of importance (5.63).

SUMMARY

This chapter provided an analysis of the data in order to provide a descriptive answer to the five sub-problems listed under the major problem. The incidence, number, choice, time allotments, and relative importance of factors influencing the development of electives were examined.

Chapter 5

STATISTICAL ANALYSIS OF DATA

This chapter contains the statistical analysis of the collected data designed to discover the significant differences among elective programs as regarding the number, element of choice, time allocations, and the perceived importance of the factors influencing the development of their electives. The aim was to discover which of the significant differences were associated with each of these four categorical variables: school type, school size, departmentalization, and guidance services.

The subgroups associated with each categorical variable were subjected to parametric analysis of variance and also to nonparametric analysis of variance if the data were not of sufficient homogeneity for parametric analysis of variance. The parametric analysis of variance used the mean scores of the characteristics of elective programs to test for significant differences among the subgroups associated with each of the categorical variables. According to Ferguson (1966:294), a basic assumption in the application of this analysis of variance is that the variances in the populations from which the samples are drawn are equal or homogeneous. Where the variance is of insufficient homogeneity, "it may be possible to use a nonparametric procedure."

This nonparametric procedure was the Kruskal-Wallis test which does not use the mean scores of the characteristics of elective programs, but rather, the sum of ranks. This means that all the observations in the subgroups are ranked where "the lowest value receives a rank of 1, the next lowest 2, and so on" (Ferguson, 1966:362). The sum of ranks for each subgroup is obtained and a statistic H is calculated. H is distributed as chi-square, and on reference to a table of chi-squares, the level of significance of H can be calculated.

For this study, the parametric analysis used the Scheffé test of probability. Since this is a rigorous test (Ferguson, 1966:297), differences at the .10 level of probability were considered to be significant. When using the Kruskal-Wallis test, which is not as rigorous as the Scheffé test, differences were considered significant if they occurred at the .05 level of probability.

SIGNIFICANT DIFFERENCES AND SCHOOL TYPE

Chapter 3 states that the data were categorized into four groups based on the variable of school type. Type 1 schools were schools with junior high school grades only; Type 2 schools were schools with junior high and senior high school grades; Type 3 schools had elementary and junior high school grades; and Type 4 schools included those schools with elementary, junior high, and senior high school grades.

Number of Electives

Table 16 shows the frequency distribution of the number of electives taught in each of the four types of school categories. The mean number of electives offered by Type 1 schools was 12.4; Type 2 schools offered a mean number of electives of 11.3; a mean number of electives of 10.0 was offered by Type 3 schools; and Type 4 schools offered a mean number of electives of 9.2. Since the data were of insufficient homogeneity, the Kruskal-Wallis test for analysis of variance was used. The sum of ranks of elective ranges for Type 1 schools was 4,542; for Type 2 schools it was 3,828; for Type 3 schools it was 5,998; and, for Type 4 schools the sum of ranks was 6,028. No significant differences were found to exist among schools of various types since the H-value was only 1.059, while the required chi-square value was 7.82 at the .05 level of probability.

Element of Choice

Table 17 shows the frequency distribution of indices of choice in each of the types of school categories. The mean index of choice for Type 1 schools was .554; for Type 2 schools it was .624; Type 3 schools had a mean index of choice of .645; and, for Type 4 schools the mean index of choice in elective programs was .714. The parametric analysis of variance produced only one significant difference between these mean indices of choice and that was between Type 1 and Type 2 schools.

Table 16

Frequency Distribution of the Number of
Electives Offered by School Types

Number of electives	School types			
	1	2	3	4
More than 19	1	2	1	0
19	1	2	0	0
18	0	0	0	0
17	1	0	0	0
16	1	1	1	0
15	4	0	1	1
14	5	5	4	0
13	4	2	0	3
12	10	5	3	4
11	13	5	8	9
10	2	5	9	13
9	4	3	6	11
8	1	3	11	6
7	0	3	6	4
6	0	2	4	3
5	0	0	2	5
Less than 5	1	0	0	0
Totals	48	38	56	59
Mean number	12.4	11.3	10.0	9.2
Sum of ranks	4,542	3,832	5,998	6,028

Types: 1 = junior high school grades only
 2 = junior-senior high school grades
 3 = elementary-junior high school grades
 4 = elementary-junior-senior high school grades

Table 17

Frequency Distribution of Indices of Choice in
Elective Programs by School Type

Indices of choice	School types			
	1	2	3	4
.100 to .199	0	0	1	0
.200 to .299	1	0	2	0
.300 to .399	6	8	3	4
.400 to .499	12	4	11	9
.500 to .599	13	7	9	7
.600 to .699	7	6	6	8
.700 to .799	6	5	9	4
.800 to .899	1	3	6	11
.900 to .999	1	2	4	6
1.000	1	3	5	10
Totals	48	38	56	59
Mean index	.554	.624	.645	.714
Sign. diff.	1 and 2			
Level of sign.	.0009			

School types: 1 = junior high school grades only
 2 = junior-senior high school grades
 3 = elementary-junior high school grades
 4 = elementary-junior-senior high school grades

Time Allotted to Elective Studies

Table 18 shows the frequency distribution of amounts of time in each of the four types of school categories. The mean elective time for Type 1 schools was 463 minutes per week; for Type 2 and Type 3 schools the mean elective time was 447 minutes per week; and 477 minutes per week was the mean elective time in Type 4 schools. None of the differences between these mean time allocations for elective study were found to be significant.

Importance of Value-factors

Table 19 shows the mean rankings of each of the factors influencing the implementation of a program of electives. Since the factor with the highest mean was ranked as 1, the rankings of importance were pupil interests as first, teacher interests and qualifications as second and third, school facilities as fourth, community expectations as fifth, and "other factors" as sixth. This pattern was also discovered to exist for the data as a whole. Not one of the mean rankings differed significantly from the corresponding mean ranking of the other school type categories.

SIGNIFICANT DIFFERENCES AND SCHOOL SIZE

Chapter 3 states that the data were categorized into three groups associated with the variable of school size. Small schools served a junior high school body of not more than 134

Table 18

Frequency Distribution of Amounts of Time Spent
in Elective Programs by School Type

Amounts of time (min. per wk.)	School types			
	1	2	3	4
200 to 249	0	1	1	0
250 to 299	0	0	0	0
300 to 349	8	5	6	5
350 to 399	5	0	4	4
400 to 449	8	14	15	15
450 to 499	8	8	18	15
500 to 549	10	6	8	7
550 to 599	2	1	2	2
600 to 649	4	3	2	9
650 to 699	3	0	0	0
700 plus	0	0	1	2
Totals	48	38	56	59
Mean amount	463	447	447	477

School types: 1 = junior high school grades only
 2 = junior-senior high school grades only
 3 = elementary-junior high school grades
 4 = elementary-junior-senior high school grades

Table 19

Mean Rankings of Factors Influencing Elective
Program Implementation by School Type

Factors	School types			
	1	2	3	4
School facilities	3.43	3.24	2.98	3.24
Teacher qual.	2.67	2.50	2.62	2.54
Teacher interests	2.56	2.58	2.88	2.63
Pupil interests	1.96	2.21	2.09	2.12
Community expect.	4.56	4.98	4.78	4.90
Other factors	5.81	5.50	5.63	5.57
N =	48	38	56	59

School types: 1 = junior high school grades only
 2 = junior-senior high school grades
 3 = elementary-junior high school grades
 4 = elementary-junior-senior high school grades

students; medium-sized schools served a student body of 135 to 299 students; and large schools served a student body of over 299 junior high school students.

Number of Electives

Table 20 shows the frequency distribution of the number of electives offered in the schools of each of the three size of school categories. The mean number of electives for small schools was 8.6; for medium-sized schools the mean number of electives offered was 10.9; and for large schools it was 12.2. Since the homogeneity of variance was insufficient, the Kruskal-Wallis test for analysis of variance was used.

The sum of ranks, as established by the Kruskal-Wallis test, of the number of electives offered were: 7,188 for small schools; 7,934.5 for medium-sized schools; and 5,073 for large schools. The required chi-square value was 5.99 at the .05 level of probability, and the obtained H-value was equal to 17.140. Consequently, the number of electives offered by small schools were found to differ significantly from those of medium-sized schools and large schools, and the number of electives offered by medium-sized schools were found to differ significantly from the number of electives offered by large schools.

Element of Choice

Table 21 shows the frequency distribution of indices of choice in each of the size of school categories. Small schools

Table 20

Frequency Distribution of the Number of
Electives Taught by School Size

Number of electives	School size		
	Small	Medium	Large
More than 19	0	1	3
19	0	2	0
18	0	0	0
17	0	0	1
16	0	1	2
15	0	2	4
14	0	7	7
13	1	4	4
12	4	5	13
11	10	13	12
10	9	15	5
9	11	9	4
8	13	6	2
7	10	2	1
6	5	3	1
5	7	0	0
Less than 5	0	0	1
Totals	70	70	61
Mean number	8.6	10.9	12.2
Sum of ranks	7,188	7,934.5	5,073
Sign. diff.	small - medium		
	small - large		
	medium - large		

Sizes: Small = up to 134 junior high school students
Medium = from 135 to 299 junior high school students
Large = 300, or more, junior high school students

Table 21

Frequency Distribution of Indices of Choice in
Elective Programs by School Size

Indices of choice	School size		
	Small	Medium	Large
.100 to .199	0	0	1
.200 to .299	1	1	1
.300 to .399	2	7	12
.400 to .499	7	10	19
.500 to .599	5	19	12
.600 to .699	10	9	8
.700 to .799	6	12	6
.800 to .899	17	4	0
.900 to .999	8	4	1
1.000	14	4	1
Totals	70	70	61
Mean index	.764	.623	.516
Sign. diff.	small - medium at .0039 level		
	small - large at .000 level		
	medium - large at .000 level		

Sizes: Small = up to 134 junior high school students
Medium = from 135 to 299 junior high school students
Large = 300, or more, junior high school students

had a mean index of choice of .764, medium-sized schools had a mean index of choice of .623, and large schools had a mean index of choice of .516. Parametric analysis of variance found the mean indices of choice between small and medium-sized schools, between small and large schools, and between medium-sized and large schools to be significantly different.

Time Allotted to Elective Study

Table 22 shows the frequency distribution of amounts of time allotted to elective studies in each of the three school size categories. The mean time spent by students in elective programs was 463 minutes per week in small schools; 464 minutes per week in medium-sized schools; and 449 minutes per week in large schools. No significant differences between school size categories as regarding the time spent by students in elective programs of study were found.

Importance of Value-factors

Table 23 shows the rankings of each of the factors influencing the implementation of programs of elective study by the three school size categories. Once again, each size category agreed with the overall pattern of importance of these factors. None of the means differed significantly from the corresponding mean rankings among the various school size categories.

Table 22

Frequency Distribution of Amounts of Time Spent
in Elective Programs by School Size

Amounts of time (min. per wk.)	School size		
	Small	Medium	Large
200 to 249	2	0	0
250 to 299	0	0	0
300 to 349	6	9	9
350 to 399	4	5	4
400 to 449	17	19	16
450 to 499	17	17	15
500 to 549	12	7	12
550 to 599	2	4	1
600 to 649	10	6	2
650 to 699	0	1	2
700 plus	0	2	0
Totals	70	70	61
Mean amount	463	464	449

Sizes: Small = up to 134 junior high school students
Medium = from 135 to 299 junior high school students
Large = 300, or more, junior high school students

Table 23

Mean Rankings of Factors Influencing Elective
Program Implementation by School Size

Factors	School size		
	Small	Medium	Large
School facilities	3.07	3.11	3.49
Teacher qual.	2.41	2.61	2.77
Teacher interests	2.83	2.69	2.48
Pupil interests	2.20	2.16	1.89
Community expect.	4.83	4.93	4.62
Other factors	5.66	5.50	5.75
N =	70	70	61

Sizes: Small = up to 134 junior high school students
Medium = from 135 to 299 junior high school students
Large = 300, or more, junior high school students

SIGNIFICANT DIFFERENCES AND DEPARTMENTALIZATION

Chapter 3 states that the third grouping of the data was based on departmentalization, that is, on the number of department heads present on the school. T-tests for significant differences between schools without departments and those with departments were run. Subsequent to the t-tests, the Kruskal-Wallis test was run to test for differences between schools with various levels of departmentalization. Level 1 represented schools with up to three department heads; level 2 represented schools with four or five department heads; and level 3 represented schools with six or more department heads.

Number of Electives

Table 24 shows the frequency distribution of the number of electives taught in schools without and those with department heads. The mean number of electives in schools without department heads was 10.2 while the mean for schools with department heads was 11.2. The t-test of probability of significant differences showed the difference between these means to be significant.

The group of schools with department heads was recategorized to test for significant differences between the three levels of departmentalization. Table 25 shows the frequency distribution of the number of electives taught by schools in these levels. The mean number of electives taught in schools of level 1 was 10.2; in schools of level 2 the mean number of electives taught

Table 24

Frequency Distribution of the Number of Electives
Offered by Departmentalization

Number of electives	Departmentalization	
	With	Without
More than 19	0	4
19	2	1
18	0	0
17	1	0
16	3	0
15	3	3
14	6	8
13	4	5
12	11	11
11	14	21
10	7	22
9	5	19
8	5	16
7	3	10
6	4	5
5	3	4
Less than 5	1	0
Totals	72	129
Mean number	11.2	10.2
Level of sign. diff.	.06	

Table 25

Frequency Distribution of the Number of Electives
Taught in Schools with Departmentalization

Number of electives	Departmentalization		
	Level 1	Level 2	Level 3
More than 19	0	0	2
19	0	0	1
18	0	0	0
17	0	0	1
16	1	0	1
15	1	2	0
14	4	0	3
13	0	2	2
12	3	6	2
11	6	4	3
10	4	2	1
9	2	2	1
8	1	1	3
7	1	1	1
6	4	0	0
5	2	0	1
Less than 5	0	0	1
Totals	29	20	23
Mean number	10.2	11.2	12.5
Sum of ranks	915	774	939

Levels: 1 = up to 3 department heads
 2 = four or five department heads
 3 = six, or more, department heads

was 11.2; and the mean number of electives taught in schools of level three was 12.5. Due to the small number of schools in each group, the Kruskal-Wallis test was used to test for significant differences. Since the required chi-square value was 5.99 but the obtained H-value was only 2.857, none of the differences were found to be significant.

Element of Choice

Table 26 shows the frequency distribution of indices of choice among schools without and those with departmentalization. Schools with no department heads had a mean index of choice of .656, while schools with department heads had a mean index of choice of .611. The t-test for significant differences did not find the difference between these means to be significant.

The schools with department heads were recategorized into the three levels of departmentalization for the Kruskal-Wallis test. Table 27 summarizes the frequency distribution of the indices of choice among these three levels. Since the required chi-square value was 5.99 but the achieved H-value was only 2.519, the differences were not found to be significant.

Time Allotted to Elective Studies

Table 28 shows the distribution frequency of amounts of time spent in elective programs by students in the schools grouped on the basis of whether or not the schools had departmentalization for instruction. The mean amount of time spent in elective study

Table 26

Frequency Distribution of Indices of Choice in
Elective Programs by Departmentalization

Indices of choice	Departmentalization	
	With	Without
.100 to .199	0	1
.200 to .299	1	2
.300 to .399	8	13
.400 to .499	15	21
.500 to .599	16	20
.600 to .699	11	16
.700 to .799	9	15
.800 to .899	1	20
.900 to .999	5	8
1.000	6	13
Totals	72	129
Mean index	.611	.656

Table 27

Frequency Distribution of Indices of Choice in
Schools with Departmentalization

Indices of choice	Departmentalization		
	Level 1	Level 2	Level 3
.100 to .199	0	0	0
.200 to .299	0	1	0
.300 to .399	4	2	2
.400 to .499	5	4	6
.500 to .599	4	4	6
.600 to .699	3	3	5
.700 to .799	5	2	2
.800 to .899	1	0	0
.900 to .999	2	1	2
1.000	3	3	0
Totals	29	20	23
Sum of ranks	1,135.5	604	888.5

Levels: 1 = up to three department heads
 2 = four or five department heads
 3 = 6, or more, department heads

Table 28

Frequency Distribution of Amounts of Time Spent
in Electives by Departmentalization

Amounts of time (min. per wk.)	Departmentalization	
	With	Without
200 to 249	1	1
250 to 299	0	0
300 to 349	9	15
350 to 399	4	9
400 to 449	20	32
450 to 499	16	33
500 to 549	14	17
550 to 599	3	4
600 to 649	3	15
650 to 699	2	1
700 plus	0	2
Totals	72	129
Mean amount	456	462

for schools with department heads was 456 minutes per week, and for schools without department heads, the elective time allocation was 462 minutes per week (mean time). The t-test for significant differences between these means, showed that the differences were not significant.

The data were further grouped to discover if there were significant differences in time allocations for elective study among schools with differing levels of departmentalization. The frequency distribution of amounts of time spent in electives by students in schools with departments is shown in Table 29. The Kruskal-Wallis test of analysis of variance, applied to the three groups, produced an H-value of 1.234. Since the required chi-square value was 5.99, the differences in elective time allocations associated with varying levels of departmentalization were not found to be significant.

Importance of Value-factors

Table 30 shows the mean rankings of each of the factors influencing the implementation of programs of elective study among schools with and without departmentalization. No significant differences appeared between the mean rankings except between the rankings for community expectations. In addition, none of the sum of ranks were found to be significantly different from the other corresponding sums of ranks when the Kruskal-Wallis test of analysis was applied to the groups of schools with department heads (Table 31).

Table 29

Frequency Distribution of Elective Time
Allocations Among Schools with
Departmentalization

Amounts of time (min. per wk.)	Departmentalization		
	Level 1	Level 2	Level 3
200 to 249	0	1	0
250 to 299	0	0	0
300 to 349	2	2	5
350 to 399	1	3	0
400 to 449	9	4	7
450 to 499	8	5	3
500 to 549	5	3	6
550 to 599	1	1	1
600 to 649	2	0	1
650 to 699	1	1	0
700 plus	0	0	0
Totals	29	20	23
Sums of ranks	1,147.5	659	821

Levels: 1 = up to 3 department heads
 2 = 4 or 5 department heads
 3 = 6, or more, department heads

Table 30

Mean Rankings of Factors Influencing
Elective Program Implementation
by Departmentalization

Factors	Departmentalization	
	With	Without
School facilities	3.19	3.22
Teacher qual.	2.59	2.58
Teacher interests	2.64	2.69
Pupil interests	2.05	2.10
Community expect.	4.63	4.90
Other factors	5.90	5.48
N =	72	129
Sign. diff.	community expect. at .017 level	

Table 31

Sum of Ranks of Factors Influencing
Elective Program Implementation
in Departmentalized Schools

Factors	Departmentalization		
	Level 1	Level 2	Level 3
School facilities	1021.5	785.0	821.5
Teacher qual.	1036.0	788.0	804.0
Teacher interests	1032.0	678.0	918.0
Pupil interests	1062.5	713.5	852.0
Community expect.	1098.0	697.0	833.0
Other factors	1102.0	723.0	803.0
N =	29	20	23

SIGNIFICANT DIFFERENCES AND GUIDANCE SERVICES

Chapter 3 states that the fourth grouping of data was based on the formal guidance services provided in the schools, and expressed in terms of the number of minutes of guidance services available per pupil per week. Four groups were developed as follows: those schools with no guidance services; those schools with limited guidance services (up to 1.59 minutes per pupil per week); those schools with moderate guidance services (from 1.60 to 2.59 minutes per pupil per week); and, finally, those schools with extensive guidance services (2.6 or more minutes per pupil per week).

Number of Electives

Table 32 shows the frequency distribution of the number of electives taught in each of the categories of schools, based on the available guidance services. The mean number of electives taught in schools without guidance services was 9.8; for schools with limited guidance services, the mean number of electives taught was 10.0; for schools with moderate guidance services, the mean number of electives taught was 11.4; and for schools with extensive guidance services the mean number of electives taught was 11.3. Since the homogeneity of variance was insufficient, the Kruskal-Wallis test was used. Since the H-value was only .983 and the required chi-square value was 7.82, the mean number of electives taught by schools in the subgroups associated with guidance services

Table 32

Frequency Distribution of the Number of
Electives Taught in Schools with
Various Guidance Services

Number of electives	Guidance services			
	None	Limited	Moderate	Extensive
More than 19	0	1	1	2
19	0	1	0	2
18	0	0	0	0
17	0	0	1	0
16	0	0	3	0
15	1	2	1	2
14	3	2	4	5
13	2	3	0	4
12	6	3	7	6
11	11	4	10	10
10	8	11	7	3
9	5	8	6	5
8	7	8	5	1
7	5	4	1	3
6	2	3	1	3
5	3	1	2	1
Less than 5	0	0	0	1
Totals	53	51	49	48
Mean number	9.8	10.0	11.4	11.3
Sum of ranks	5,225	5,406.5	4,570	4,898.5

Amounts: Limited = .001 to 1.599 min. per pupil per wk.
 Moderate = 1.600 to 2.599 min. per pupil per wk.
 Extensive = more than 2.590 min. per pupil per wk.

were not found to be significantly different.

Element of Choice

Table 33 shows the frequency distribution of the indices of choice in the four school categories based on the degree of guidance services provided. Schools with no guidance services had a mean index of choice of .697; schools with limited guidance services had a mean index of choice of .672; schools with moderate guidance services had a mean index of choice of .608; and schools with extensive guidance services had a mean index of choice of .576. Analysis of variance produced only one significant difference among these mean indices of choice and that was between the schools with no guidance services and schools with extensive guidance services.

Time Allotted to Elective Studies

Table 34 shows the frequency distribution of amounts of time spent by students in elective study in the four categories of schools based on the guidance services provided in the schools. The mean time spent in elective study in schools with none or limited guidance services was 467 minutes per week; schools with moderate guidance services had a mean elective time allocation of 463 minutes per week; and schools with extensive guidance services had a mean time of elective study of 440 minutes per week. Since the homogeneity of variance was insufficient, the Kruskal-Wallis test was used. The required chi-square value of 7.82 and the

Table 33

Frequency Distribution of Indices of Choice in
Elective Programs by Guidance Services

Indices of choice	Guidance services			
	None	Limited	Moderate	Extensive
.100 to .199	0	0	0	1
.200 to .299	1	0	1	1
.300 to .399	4	5	7	5
.400 to .499	8	7	12	9
.500 to .599	5	12	8	11
.600 to .699	7	7	3	10
.700 to .799	8	4	6	6
.800 to .899	8	4	7	2
.900 to .999	5	5	3	0
1.000	7	7	2	3
Totals	53	51	49	48
Mean index	.697	.672	.608	.576
Sign. diff.	limited - extensive at .03 level			

Amounts: Limited = up to 1.59 minutes per pupil per week
 Moderate = from 1.6 to 2.59 min. per pupil per week
 Extensive = more than 2.59 minutes per pupil per wk.

Table 34

Frequency Distribution of Amounts of Time
Spent in Electives by Guidance Services

Amounts of time (min. per wk.)	Guidance services			
	None	Limited	Moderate	Extensive
200 to 249	0	2	0	0
250 to 299	0	0	0	0
300 to 349	5	4	8	7
350 to 399	2	4	4	3
400 to 449	15	11	8	18
450 to 499	15	11	13	10
500 to 549	9	7	9	6
550 to 599	0	3	2	2
600 to 649	6	7	4	1
650 to 699	1	0	1	1
700 plus	0	2	0	0
Totals	53	51	49	48
Mean amount	467	467	463	440
Sum of ranks	5,561	5,432.5	4,808.5	4,298

Amounts: Limited = up to 1.599 min. per pupil per wk.

Moderate = from 1.6 to 2.599 min. per pupil per wk.

Extensive = more than 2.599 min. per pupil per wk.

obtained H-value of 3.31 meant that the differences among mean time allocations for elective study in the various groups associated with guidance services were not statistically significant.

Importance of Value-factors

Table 35 shows the mean rankings of the importance of the factors influencing the development of elective programs among schools with varying amounts of guidance services. Once again the various categories of schools grouped by the degree of guidance services provided, agreed with the overall pattern of rankings of the factors influencing the elective programs. Not one of the mean rankings in the subgroups was found to be significantly different from the corresponding mean rankings in other groups.

SUMMARY

In Chapter 5 it was explained how the various subgroups of the data were delineated and then compared. The statistical analyses were described and the results presented. Chapter 5 dealt with the second part of each of the last four sub-problems listed in Chapter 1: "What are the significant differences between schools as regarding the number of electives, the elements of choice, the time allocations for elective study, and the

Table 35

Mean Rankings of Factors Influencing Elective
Program Implementation by Guidance Services

Factors	Guidance services			
	None	Limited	Moderate	Extensive
School facilites	3.17	3.12	3.24	3.33
Teacher qual.	2.67	2.39	2.51	2.77
Teacher interests	2.60	2.78	2.69	2.60
Pupil interests	2.13	2.21	2.06	1.94
Community expect.	4.79	4.92	4.78	4.71
Other factors	5.62	5.57	5.71	5.63
N =	53	51	49	48

Amounts: Limited = up to 1.599 min. per wk. per pupil
 Moderate = from 1.600 to 2.599 min. per wk. per pupil
 Extensive = more than 2.599 min. per pupil per wk.

relative importance of factors influencing elective program implementation as reported by the various junior high school principals in Alberta?" The implications and extensions of the data analysis will be outlined in Chapter 6.

Chapter 6

SUMMARY, IMPLICATIONS AND EXTENSIONS

In 1969 the Alberta Department of Education instituted a revised program of studies for junior high schools. A major revision was in the program of electives, part of which was the addition of six areas of elective studies usually known as "B" options or academic options.

SUMMARY OF FINDINGS

The survey of literature produced four salient features of elective programs: number of electives offered, element of choice, time allocation, and value-factors underlying the implementation of elective programs. Four administrative structures, namely, the type, size, departmentalization and guidance services of the school, were delineated as variables that could greatly enhance the salient features mentioned above.

It became the problem of this study, then, to examine some Alberta junior high schools in order to describe their elective programs in terms of the salient features and to discover significant differences associated with the various categories of schools based on the administrative structures outlined above. To gather data pertinent to this problem, the principals of 201 junior high schools, serving 49,740 students, were surveyed by a questionnaire.

Summary of Descriptive Analysis

Of the 49,740 students, less than one percent were studying health and guidance. German, Ukrainian, agriculture, choral music, arts and crafts, physical education, instrumental music, general music, typewriting, mathematics, and "other electives" were taught to less than twenty-five percent of the students surveyed.

Language arts, social studies, drama, science, industrial arts, home economics, art, and French were taught to about twenty-five to fifty percent of the students. French, art, industrial arts, home economics, and science were the five electives with the highest incidence in terms of the number of students studying them. Four of the six newly recommended electives, namely, science, social studies, language arts, and mathematics were among the ten electives with the highest incidence. It seems that they were favorably accepted in the surveyed schools.

More than nineteen electives were taught in only four of the 201 surveyed schools. The number of electives most frequently offered was eleven. One school offered less than five electives.

Complete compulsion for students in "elective" programs was indicated by an index of 1.000. Nineteen schools (9.4 %) had an element of choice index of 1.000 while only one school had an element of choice of .190 which represents substantial freedom to choose. Indices of choice between .200 and .599 occurred in 47.6 percent of the schools and 42.1 percent of the schools had indices of choice between .600 and 1.000. In this

regard, it was noted that the elective with the lowest incidence (guidance), had the highest rate of compulsion.

The mean time allocation for elective study was 459 minutes per week. Twenty-six schools allotted less than the departmental minimum (345 minutes per week) while only two schools allotted more than the departmental maximum (700 minutes per week).

The value-factors underlying the development of elective programs were ranked in order of importance, from most to least important, as follows: pupil interests, teacher qualifications, teacher interests, school facilities, and community expectations.

Summary of Statistical Analysis

Sixty-eight differences among the salient features of elective programs were tested for their significance by one or more of these three methods: parametric analysis of variance, t-tests for significant differences, and nonparametric analysis of variance by the Kruskal-Wallis test. These nine differences were found to be significant:

1. Small schools offered significantly fewer electives than did medium-sized schools.

2. Small schools offered significantly fewer electives than did large schools.

3. Medium-sized schools offered significantly fewer electives than did large schools.

4. Schools with department heads offered significantly

more electives than did schools without departmentalization.

5. The element of choice in elective programs in Type 1 schools was significantly greater than in Type 2 schools.

6. The element of choice in elective programs in small schools was significantly smaller than in medium-sized schools.

7. The element of choice in elective programs in small schools was significantly smaller than in large schools.

8. The element of choice in elective programs in medium-sized schools was significantly smaller than in large schools.

9. The element of choice in elective programs in schools with extensive guidance services was significantly greater than in schools with no guidance services.

IMPLICATIONS

1. Significant differences in the salient features of the elective programs surveyed in the junior high schools were primarily related to the size of the junior high school student body. This seems to imply that in order to facilitate the implementation of junior high school elective programs, school boards should be encouraged to centralize the junior high schools so as to increase the number of students in the junior high schools.

2. Although the larger schools tended to implement the recommended elective program more fully, there were some small schools with elective programs whose characteristics were near the maximum recommendations. It seems appropriate to suggest,

therefore, that school administrators need to look carefully for measures other than size to enhance the salient features of the elective programs in their schools.

3. Guidance services, while they may be of great value to the students, were not associated with the desired features of elective programs in any but one of the tests for significant differences. This held true for departmentalization as well. This would seem to imply that guidance counsellors and department heads need to examine carefully how they might function more effectively to enhance the features of elective programs.

4. This study showed that there were more schools with elective programs near the departmental minimal requirements than near the departmental maximal requirements. One-half or less of the electives recommended by the Alberta Department of Education was offered in 104 of the schools surveyed. Only one school had an element of choice greater than the maximal requirements of the Department of Education. An index of choice greater than .500 was found in 140 schools. Two schools allotted more time for elective study than the maximum time allotment recommended by the Department of Education in Alberta. However, 140 schools allotted less than 500 minutes of instructional time for elective study per week. Perhaps it is suitable, in this regard, to refer to the words of Verduin (1967:32) again:

History reveals that recommendations for change and prescribed curricula handed down from outside experts have not been completely accepted nor effectively utilized in the past.

If the educator does not have an active part in effecting change and does not know the rationale behind it, it will have less meaning and interest for him Curriculum changes handed down by experts are not likely to be implemented.

Perhaps more effort needs to be exerted to demonstrate to educators the desirability of elective programs and to encourage them to design schools that are more suited to the implementation of recommended programs.

5. Most of the schools, regardless of their responses in the questionnaire, stated that pupil interests were of greatest importance in developing elective programs. Teacher interests and qualifications came next, followed by school facilities and, finally, community expectations. In view of this, the fact that more schools had elective programs whose features were near minimal requirements rather than maximal requirements presents an interesting paradox. It can mean that administrative factors override the values of the responsible educators, or, perhaps, that educators rank the importance of values in accord with their perceptions of society's expectations. A possible implication here is that administrators need to plan programs of study more carefully in accordance with the aims and values underlying them.

RECOMMENDATIONS FOR FURTHER STUDY

1. This study can be duplicated in various settings, involving other school samples, and different departmentally

recommended programs of elective study.

2. Studies can be delimited to a survey of only one elective course, or, perhaps, several related courses.

3. The effect of devices such as semestering and cross-grading in overcoming limitations, such as size, on the nature of elective programs can be explored.

4. Studies need to examine the quality of elective programs in regards to topics of study, methods of teaching, resources available, and individualization of instruction.

5. It needs to be discovered whether or not differences in elective programs associated with administrative variables such as school type, departmentalization, and guidance services are not in reality differences associated with the size of school.

6. Perhaps a useful research problem would be to attempt to determine the amount or degree of consensus among educators on all administrative levels, as regarding the values they consider important bases of curricular activities.

CONCLUSION

One must admit, it seems, that the stated values underlying elective programs, may not be synonymous with the values basic to the elective programs actually implemented. The matter of achieving consensus among educators in regards to values underlying education is, of course, a difficult and rather vexing problem.

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A P P E N D I X "A"

Prescribed Elective Programs in Canada:

Letters to the Provinces

Letters from Provinces



March 1, 1971

Dear Sirs,

I am currently enrolled in a Masters program in Educational Administration at the University of Alberta. As partial fulfillment of the requirements of this program I am writing a thesis on 'Time Allocation Practices in the Alberta Junior High Schools'. In connection with this research I am also interested in how the Alberta requirements compare with those of the other provinces. For this reason I would like to find out:

(a) What courses are compulsory in the junior high school grades (Grades 7,8 and 9) in your province.

(b) What courses can be taken on an elective basis.

and (c) What are the suggested weekly time allocations, if any, for each of these compulsory and elective courses.

I would appreciate receiving this information at your earliest convenience. Thank you.

Yours sincerely,

Donald R. Barnett



DEPARTMENT OF EDUCATION
VICTORIA, BRITISH COLUMBIA

March 9, 1971

Mr. Donald R. Barnett,
Faculty of Education,
Dept. of Educational
Administration,
The University of Alberta
Edmonton 7, Alberta

Dear Mr. Barnett:

Your letter of March 1, 1971 has been
referred to me for reply.

I am forwarding to you a booklet that
contains the information you request for grade
VIII and IX - the Administrative Bulletin
for Secondary Schools (1967), pages 18 and 19.

As Grade VII is included in the intermediate
grades of the elementary school, I enclose two pages
extracted from the revised Elementary Administrative
Handbook which will provide you with the suggested
time allotments for this grade under the Intermediate
column of the table of page 24.

You will note also, that the programmes
for Grade VII and VIII are relatively constant and
provide little opportunity for electives, whereas
in Grade IX elective subjects become available.

I trust this information will be
sufficient for your purposes.

Yours sincerely,

John S. Clark,
Curriculum Consultant.

JSC:kr



II. INSTRUCTIONAL TIME

A. General

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It should be noted that the following schedule provides guidelines in order that all subjects of the curriculum be taught to each class. Notwithstanding specific differences in detail, all timetables must ensure:

- (a) A priority of emphasis on basic skills in language arts and in arithmetic.
- (b) Opportunity for varying instructional time in social studies, science and health in accordance with the needs of the pupils.
- (c) Opportunity for varying but not omitting instructional time for cultural and recreational activities in accordance with resources available.
- (d) A reasonable variation or balance within the schedule of teaching and learning to allow for different kinds of learning activities throughout the day and the week.
- (e) Opportunity for group teaching as well as for individual teaching and remedial instruction as required.

B. Time Allotment Guidelines

Curriculum Subjects and Activities	Primary Years	Intermediate Years
1. Language Arts (Reading, Oral, and Written Language, Spelling, Handwriting)	700	500
2. Arithmetic	150	200
3. Social Studies, Health, Science	150	300
4. Cultural and Recreational Activities (Music, Art, and Physical Education)	350	400

C. Administrative Suggestions

1. The recommended schedule for the distribution of instructional time is intended to serve as a guide. It is the responsibility of teachers and principals to interpret and implement this schedule for each class. No timetable should be so rigid that it cannot be altered as the need arises. On the other hand, timetables in general should function to give direction to the educational programme for the class. To assist in this and in the general administration of the school it is recommended that the schedule for each class be prepared in written form for reasonably large blocks of time.
2. The sole purpose in providing for flexibility in the distribution of instructional time is to facilitate differentiation of curriculum and teaching in terms of the needs of pupils.
3. For clarity in presentation the schedule has been expressed in terms of minutes per week. The following may be taken into account in interpreting and implementing the intent of this schedule:
 - (a) Departmentalization may be considered desirable in effecting maximum use of staff talents.
 - (b) Different timetables may be organized for different periods of the year; e.g., it may be wise to vary the length of physical education periods in accordance with the weather and facilities available.
 - (c) Combinations of grades or classes may make it advisable to modify the specific time for particular subjects.

DEPARTMENT OF EDUCATION
PROGRAM DEVELOPMENT — GENERAL EDUCATION BRANCH
AVORD TOWER, REGINA

MP/hi
Encl.

March 4, 1971.

Dear Mr. Barnett,

Enclosed is a page from our Division III Curriculum Guide which indicates the courses offered and the suggested time allotments.

All courses in the Division III Guide are meant to be compulsory in so far as school facilities and availability of qualified teachers are concerned. In other words there are no electives and students are expected to take the full program offered in the school. Exception to the above is that of Home Economics and Industrial Arts which are programs designed essentially for girls and boys.

Sincerely,


M. Pitsula,
Chief of Program Development,
(General Education).

Mr. Donald R. Barnett,
Department of Educational Administration,
The University of Alberta,
EDMONTON 7, Alberta.

SUGGESTED TIME ALLOTMENTS

The following is a chart of subject offerings and suggested time allotments in minutes per week.

<i>Subject</i>	<i>VII</i>	<i>VIII</i>	<i>IX</i>
English _____	360	300	300
Social Studies _____	160	160	160
Mathematics _____	200	180	180
Science _____	160	160	160
Health & Physical Education —	160	160	160
Guidance _____	40	40	40
A Second Language _____	120	120	120
Fine Arts — Art _____	120	100	100
— Music _____	120	100	100
Home Economics _____	)		
	)	160	160
Industrial Arts _____	)		
	_____	_____	_____
	1440	1480	1480

NOTE: For scheduling convenience the 40 multiple was used as the basis of time allocation. This should not be interpreted to mean that all schools must have 8 periods of 40 minutes each. Modules of 20 minutes could be used; double periods of 80 minutes could be scheduled for industrial arts and home economics.

It is intended that the schedule should be kept flexible. The suggested time allotments are an approximation of the amount of weekly time required for each subject. How time is distributed within the suggested minimums is left to the principal and staff of individual schools to decide.



MANITOBA

112

S.A.I. BULLOCK
DIRECTOR OF CURRICULA

DEPARTMENT OF EDUCATION

CURRICULUM BRANCH

1181 PORTAGE AVENUE - ROOM 411
WINNIPEG 10

MEMORANDUM TO PRINCIPALS:

Subject: Basic Outline: Grades 7 - 9

1. The attached sheet summarizes the basic outline and recommended time allotments for the revised programs in Grades 7 - 9.
2. The attention of principals is drawn specifically to the following:
 - (a) Time allotment for Literature is now included under English (not the Arts).
 - (b) Time allotment for Second Language, where it is taught, has been included as a separate item (not under Language).
 - (c) The 16% time allotment for the Practical and Fine Arts has been allotted in a block to permit as much flexibility to schools as possible.
 - (d) No separate time allotment has been given to Library. ("An adequate use of library facilities is one of the most important adjuncts to the interpretation and development of the curriculum, the library and the classroom being so closely integrated that it is difficult to conceive of one operating without the other. Every teacher in every subject should devote part of the pupil's time to library work." - Elementary Curriculum Seminar, 1964.)
 - (e) In regards to Grade 9 in 1967-68, the existing basic outline will continue unchanged (See Junior High Grades: Introduction and Social Studies, pp. 4-6) except for time allotments recommended for recently revised subject areas. The Grade 9 outline (recommended by the Elementary Curriculum Seminar) attached is included here to provide information regarding these latter time allotments only. Also see Note on Grade 9 attached.
3. It should be noted that the total basic pattern for the junior high grades (7-9) will likely come under review during 1967-68.

Att.

Curriculum Branch.
25/4/67.

GRADES 7 - 9: BASIC OUTLINE

Grades 7 & 8

English	25%
Mathematics	12%
Social Studies	12%
General Science	12%
Physical Education	6%
Health & Guidance	5%
Practical and Fine Arts	16%
*Second Language	8%
Unassigned	4%

+ Grade 9

Required

English	24%
Mathematics	12%
Social Studies	15%
General Science	12%
Physical Education	6%
Health & Guidance	5%

Options (10% each)

A minimum of two of: French, Latin, German, Ukrainian, Art, Music, Industrial Arts, Home Economics.

Unassigned 6%

113

36
51

NOTES: GRADES 7 & 8

1. Time allotments are intended as a guide, not a prescription. See Note 3, page 17, April Curriculum Bulletin. They do represent, however, the time allotments that have guided curriculum committees in the preparation of revised programs.
2. Since by September 1967 program revision in Grades 7 and 8 will be largely complete, the basic outline above should act as a guide in school time-tabling. Although different in format, the outline does not differ substantially from its predecessor (See page 4 - Junior High Grades, General Introduction and Social Studies).
- *3. Although a second language is optional, it is included as part of the total time allotment since a majority of students do in actual fact study a second language at these levels.
4. A block of time of 16% has been allotted to the Practical (Industrial Arts and Home Economics) and Fine Arts (Music, Art and Crafts) in each of Grades 7 and 8. Ideally, all these areas should be available to students during their studies in Grades 7 - 9; as a minimum, the Elementary Curriculum Seminar recommended that schools should seek to offer two of Art, Music, the Practical Arts. The 16% time block may be sub-divided according to local requirements (e.g. on the basis of 2 periods or 4 periods per week); revised programs in all these areas are being developed with these alternative patterns in mind. It should be noted that a minimum course in any of these areas is still considered to be one that provides, during the 3 years of Grades 7 - 9, the equivalent of 4 periods per week (or 120 minutes of instructional time) throughout one year, dependant upon the length of the period. Note also that Literature has now been included as part of the Language Arts program and that no separate time allotment has been given to Library.
5. At the present time, it is not planned to revise the Introduction to the Grades 7 - 9 programs, published in Junior High Grades, Introduction and Social Studies, pending further consideration of these areas during 1967-68. General administrative information in this publication will therefore continue in effect, subject to the modifications outlined as above.

+ NOTE: Grade 9

The Grade 9 basic outline is only applicable in 1967-68 insofar as it relates to recommended time allotments for subject areas already revised or to be revised next September. In the case of Art (rev. 1967) and Home Economics (rev. 1966), some time-table adjustments will be required during the period of transition. Also see note 5 preceding.



GOUVERNEMENT
DU QUÉBEC

MINISTÈRE
DE L'ÉDUCATION

SECTION GÉNÉRALE
DE L'ENSEIGNEMENT
ÉLÉMENTAIRE
ET SECONDAIRE

HÔTEL DU GOUVERNEMENT
QUÉBEC

Québec, le 29 mars 1971.

Monsieur Donald R. Barnett
Faculty of Education
Department of Educational Administration
University of Alberta
Edmonton 7.

Monsieur,

Je vous fais parvenir la grille-module des périodes obligatoires à l'école secondaire de langue française comme de langue anglaise qui a cours actuellement dans la province de Québec.

Je vous fais remarquer qu'une nouvelle grille-module beaucoup plus souple sera présentée en janvier 72 et mise à l'essai graduellement.

Dans l'espoir que ces renseignements pourront vous être utiles, je vous prie d'accepter mes meilleurs sentiments.

Le directeur du
service des Programmes

ROBERT TREMPÉ

- (a) What courses are compulsory in the junior high school Grades (7, 8, 9) in P.E. I?

	<u>Grade 7</u>	<u>Grade 8</u>	<u>Grade 9</u>
<u>Comp.</u>	English	English	English
	Maths.	Maths.	Maths.
	Science	Science	Science
	Geography	Geography	Geography
	History	History	History
	Health	Health	Health

(b)

<u>Electives</u>	Music	Music	Music
	Phys Ed.	Phys. Ed.	Phys. Ed.
	Art	Art	Art
	Home Ec.	Home Ec.	Home Ec.
	French	French	French

- (c) Schools decide how best to allocate time in relation to program authorized by this Department.

Curriculum Branch
Department of Education
Charlottetown, P. E. I.

March 31, 1971



GOVERNMENT OF NEWFOUNDLAND AND LABRADOR

DEPARTMENT OF EDUCATION

ST. JOHN'S

March 8, 1971

Mr. Donald R. Barnett
Graduate Student
Faculty of Education
The University of Alberta
Edmonton 7, Alberta

Dear Mr. Barnett:

In reply to your letter of March 1, the following are the answers to your questions:

(a) Compulsory subjects in Grades 7, 8 and 9

English
Mathematics
History
Geography
Civics
General Science
Health and Physical Education
Religious Education

(b) Electives

Art
Industrial Arts
Music
French
German
Latin
Spanish
Home Economics
Educational Drama

(c) We have discontinued suggested time allocations as of 1969 - 70.

Trust this information will be of some help to you in your research.

Yours sincerely,

O. R. LAWRENCE
ASS'T. DIRECTOR OF
INSTRUCTION

A P P E N D I X "B"

The Instrument:

Provincial A - Forms

Validation Procedures

Questionnaire

Covering Letters

Note: Principals of Schools and Teachers of one-room schools must send three copies of this form to the High School Inspector concerned before October 1.

GENERAL INFORMATION

- (1) Name of School _____ (2) School Code No. _____
- (3) School Address _____
- (4) S. District, Div., or County. Name _____ No. _____
- (5) Principal _____
- (6) Superintendent of Schools _____
- (7) High School Inspector _____
- (8) Total High School Credits offered _____
- (9) Net minutes of Instruction time per week for a 5-credit subject _____
- (10) Category of School (see Senior High School Handbook, Page 12) _____

ENROLMENT

Grade	No. of Classes	Total Enrolment	Grade	No. of Classes	Total Enrolment
VII			X		
VIII			XI		
IX			XII		
Totals					

APPROVAL

Junior High School Program

Principal _____

Superintendent of Schools _____

High School Inspector _____

Senior High School Program

Research, Development & Information

Date: February 10, 1971

MEMORANDUM:

To: B. Baker F. Loewen
V. Nakonechny B. Thompson
D. Thomas C. Climenhaga
D. Marion B. Barabash
C. Young K. Molyneux
D. Assheton-Smith V. Sulatycky

From: E. A. Mansfield

Subject: RESEARCH REQUEST - JUNIOR HIGH SCHEDULING:
Messrs. W. Sawatzky and D. Barnett

c.c. J. Reid
W. Sawatzky
D. Barnett
Dr. C. Bumbarger
Dr. L. D. Stewart
J. Yusep
W. Frey
A. Nichols
A. Walker

1. Attached please find for your information a research request form and proposed questionnaire from Messrs. Sawatzky and Barnett pertaining to their requested research study. Both these gentlemen are junior high teachers from our system on leave of absence to obtain M.Ed. degrees.

2. Following receipt of this information from the University I discussed the matter with Mr. J. Yusep, Supervisor - Educational Data Processing, Dr. C. Bumbarger, the graduate students' Advisor and Mr. B. Baker, Chairman of the Committee examining a Computerized Junior High Report Form.

3. There was a general concensus from this discussion that the following procedure would prove advantageous both to the graduate students and to our school system:

- a) That the Junior High principals constituting the reporting committee examine the details

of the proposed questionnaire, etc. to discern those revisions, deletions, or additions which would subsequently result in information useful to the principals being generated by the study.

- b) That these principals bring the "critiqued" questionnaires with them to the Committee meeting scheduled for the Superintendent's Conference Room at 1:30 p.m., February 18, 1971 (as set out in the memorandum of February 3rd from B. Baker).
- c) That the two graduate students be in attendance at the meeting so that following completion of the regular agenda the principals can give their reactions and recommendations to Mr. Sawatzky and Mr. Barnett.
- d) Subsequently Messrs. Sawatzky and Barnett can revise, if necessary, their questionnaire prior to the study proceeding further in order to ensure that the information generated will be of value to practitioners in the field.

Of course, principal participation in this critique session will be on an optional basis. However, your cooperation is solicited in view of the fact that the proposed studies do have the potential for providing us with needed information. While both Mr. Yusep and I are of the opinion that the proposed questionnaire needs work, we are also of the opinion that recommendations for change can best be made by those working most intimately with the core and elective programs.

JUNIOR HIGH SCHOOLS OF ALBERTA

QUESTIONNAIRE FOR ADMINISTRATORSGeneral Instructions

1. This questionnaire can be self-administered. Each item contains all necessary information and instructions.
2. Read ALL instructions carefully.
3. Answer ALL questions in parts I and II accurately. Your name and the name of your school will be kept in strict confidence.
4. Write your responses to the items directly in the booklet.
5. When you are finished, kindly insert the completed questionnaire into the provided, self-addressed, stamped envelope and return to us by mail.
6. Thank-you in advance. Please begin . . .

D. Barnett, W. Sawatzky
Graduate Students
Educational Administration
University of Alberta
Edmonton.

I. DESCRIPTION and CLASSIFICATION

123

A. Your school can best be described as (Check one):

- having junior high school grades only ☐
- having junior and senior high school grades only . . . ☐
- having elementary and junior high school grades only . ☐
- having elementary, junior and senior high school grades ☐

B. Fill in the following chart regarding enrolment in your school as of September 30, 1970.

Grade	Number of Classes	Total Enrolment
VII		
VIII		
IX		
Totals		

C. The number of full-time equivalent junior high school teachers in your school as of September 30, 1970 was

D. The number of minutes per week of counselling time provided by your school for the junior high school grades this year is

E. The number of minutes of INSTRUCTION offered daily in your school during this school year is: (exclude time for registration, recesses or class changes)

F. In which of the following areas has your school either formally or informally designated department heads for junior high instruction? (Check the appropriate items).

- | | | | |
|------------------------------------|--------------------------|------------------------|--------------------------|
| Mathematics | ☐ | Fine Arts | ☐ |
| Science | ☐ | None designated | ☐ |
| Language Arts | ☐ | Others (specify) _____ | |
| Physical Education and Health | ☐ | _____ | |
| Industrial Arts and Home Economics | ☐ | _____ | |

II. PROGRAM INFORMATION

A. Do you schedule study periods in half, or more, of your classes in a particular grade? (Check Yes or No). If yes, how many minutes per week are devoted to study periods for those classes that have them?

- | | | | |
|-------------|-----------------------------|------------------------------|-----------------------------------|
| Grade Seven | NO ☐ | YES ☐ | <input type="text"/> min. per wk. |
| Grade Eight | NO ☐ | Yes ☐ | <input type="text"/> min. per wk. |
| Grade Nine | NO ☐ | YES ☐ | <input type="text"/> min. per wk. |

B. The greatest number of electives studied by a student in each of the following grades in your school is

Grade 7 Grade 8 Grade 9

C. The least number of electives studied by a student in each of the following grades in your school is

Grade 7 Grade 8 Grade 9

D. The number of minutes per week that a student in each of the following grades in your school spends in the study of electives is

Grade 7 Grade 8 Grade 9

a. School facilities (design, size, etc.) ☐

b. Teacher qualifications ☐

c. Teacher interests ☐

d. Pupil interest ☐

e. Community expectations ☐

f. Others: specify ☐

(e.g. Language Arts	125	58	)
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(Use reverse side if necessary)



GOVERNMENT OF THE PROVINCE OF ALBERTA
DEPARTMENT OF EDUCATION

REFER TO FILE NO.

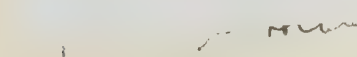
ADMINISTRATION BUILDING
10320 - 98 AVENUE
EDMONTON , ALBERTA
AREA CODE 403
TELEPHONE: 229-3262

22 February, 1971

To: Junior High School Principals

This is to indicate that I have discussed with Mr. Barnett and Mr. Sawatzky their survey of junior high school options. It is my judgment that the information will be of substantial use to the Secondary School Curriculum Board in evaluating this concept. I would urge your cooperation with these investigators.

Yours very truly,


JAMES S. HRABI
Director of Curriculum

JSH.md



We are writing to ask your cooperation in the completion of the enclosed questionnaire which deals with the junior high school program. The questionnaire is being distributed to three hundred Alberta principals in order to study practices as they actually exist in the schools.

This study is being undertaken in partial fulfillment of the requirements for the degree of Master of Education in Educational Administration. The research is being conducted with the approval of the Department of Educational Administration and Dr. J. Hrabi, Director of Curriculum for the Department of Education.

Anonymity of response is assured. We are concerned with specific schools only in so far as they fit into the total scheme and no schools will be mentioned except as part of the entire sample. The numbers on the front page of the questionnaire are merely used for the purpose of facilitating the collection of data.

We feel that the information obtained will be significant in the areas of both core and elective practices. After completion of our studies, a summary of the results will be sent to all participating schools.

Thank you for giving your consideration and time to the enclosed questionnaire and mailing it to us at your earliest convenience.

Yours sincerely,

D. Barnett, W. Sawatzky
Graduate Students

A P P E N D I X "C"

Data Analysis:

Abstraction Sheets

Computer Program

ABSTRACTION OF DATA--COMPUTER CARDS # 1,2, 3

128

c.c.'s	Factors	Data
1 - 3	School Code	_____
4	Type	_____
5 - 8	# of students	_____
9 - 10	# of teachers	_____
11 - 13	T - P ratio	_____
14 - 17	Counselling	_____
18 - 22	C - P ratio	_____
23	Departments #	_____
24	Mathematics	_____
25	Science	_____
26	Soc. Stud.	_____
27	Lang. Arts	_____
28	P.E./Health	_____
29	I.A./Home Ec.	_____
30	Fine Arts	_____
31	None	_____
32	Others	_____
33 - 36	Teaching Time	_____
37 - 39	Elective Time	_____
40 - 43	T - E ratio	_____
44 - 48	Electives(Com)	_____
49 - 53	Choice	_____
54 - 58	Comp. Index	_____
59	Rating-school	_____
60	Teacher Qual.	_____
61	Teacher Int.	_____
62	Pupil Int.	_____
63	Comm. Exp.	_____
64	Others	_____
65	Electives 7	_____
66	8	_____
67	9	_____
68-72	Elective Av.	_____
80	Card #	<u>1</u>

c.c.'s	Data	Factors
1 - 3	_____	School Code
4 - 5	_____	Elective Range
6 - 11	_____	Agriculture
12- 17	_____	Art
18- 23	_____	Arts & Crafts
24-29	_____	Drama
30-35	_____	Typing
36-41	_____	Music (Gen)
42-47	_____	Music (Choral)
48-53	_____	Music (Instr)
54-59	_____	Home Ec.
60-65	_____	Industrial A.
66-71	_____	French
72-77	_____	German
80	<u>2</u>	Card #
1 - 3	_____	School Code
4 - 9	_____	Latin
10-15	_____	Ukrainian
16-21	_____	Guidance
22-27	_____	Language Arts
28-33	_____	Mathematics
34-39	_____	Science
40-45	_____	Social Studies
46-51	_____	Phys. Ed.
52-57	_____	Health
58-63	_____	Others
64-65	_____	# of Others
80	<u>3</u>	Card #

COMPUTER PROGRAM FOR
Incidence of Electives

FORTRAN IV G COMPILER

MAIN

03-24-71

08:42.31

```

0001          INTEGER TGT(22),KOUNT(22),INFO(44)
0002          DIMENSION XMEAN(22)
0003          30 DO 10 I=1,22
0004              KCUNT (I)=0
0005              XMEAN(I)=0.0
0006          10 TGT(I)=0
0007          15 READ(5,11,END=40) ID
0008          11 FORMAT(I1)
0009              IF (ID.EQ.0) GOTO 20
0010              READ(5,12) INFO
0011          12 FOPMAT(5X,24I3/3X,20I3)
0012              DO 13 I=1,43,2
0013                  IF (INFO(I).EQ.0) GOTO 13
0014                  II=I/2+1
0015                  TGT(II)=TGT(II)+INFO(I+1)
0016                  KCUNT(II)=KCUNT(II)+1
0017                  XMEAN(II)=XMEAN(II)+FLOAT(INFO(I))
0018          13 CCNTINUE
0019              GOTO 15
0020          20 DO 21 I=1,22
0021              IF (KOUNT(I).GT.0) XMEAN(I)=XMEAN(I)/FLOAT(KOUNT(I))
0022          21 CONTINUE
0023              WRITE(6,25)
0024          25 FCRMAT(///)
0025              DO 24 I=1,22
0026                  WRITE(6,22)I,KOUNT(I),XMEAN(I),TOT(I)
0027          22 FCRMAT (2I10,F10.2,I8)
0028          24 CCNTINUE
0029              GOTO 30
0030          40 STOP
0031          END

```

TOTAL MEMORY REQUIREMENTS 000528 BYTES

08:42.33 1.125 RC=0

B30000